

Cigarette Jr. owned by L. Gordon Hamersley of New York City, starting on her run against time from New York to Albany.. Cigarette Jr. completed 129 of the 137 miles between the two cities in record time, being about two minutes ahead of the existing record. However, at this point, gasoline trouble developed and the boat was obliged to abandon the run. It is hoped to make another attempt this month to break the record held by Teaser

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SEPT.

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Tampa Enters National Racing With D. P. Davis' Gold Cup Challenger

MISS TAMPA, challenger for the 1925 Gold Cup and entry of D. P. Davis in the national and international races at Detroit, is only the forerunner of many yachting and boating activities for Davis Islands. The coming winter's program for this \$30,000,000 development on Florida's famous west coast already includes two regattas of national importance. And Mr. Davis is building ten Junior Gold Cup runabouts to be known as TAMPA BAY-BIES for competition in all Florida races.

Davis Islands is the most fascinating engineering project in Florida today—a wonder development in a sportsman's paradise just made for pleasure. With eleven and one-half miles of waterfront, yacht basins and inland waterways, Davis Islands is indeed the haven of yachtsmen of the west coast of Florida. Here will be found docks with all the facilities for the largest yachts. And in the waters all about the silvery Tarpon, king of all game fish, rules supreme. Visit Tampa and Davis Islands this season. See for yourself this gorgeous setting for distinguished southern homes being built just one-half mile from the City Hall of the largest community in Florida.

DAVIS ISLANDS
TAMPA IN THE BAY

D. P. DAVIS PROPERTIES
GENERAL OFFICES, TAMPA, FLORIDA
Branches in Principal Southern Cities

World's Records to Fall



The Gold Cup Races on Manhasset Bay Attract a Field of Three Hundred Entries for the Greatest Racing Event in History

NEW YORKERS are to see their first National Motor Boat Regatta in many years on Manhasset Bay, Long Island Sound, Saturday and Sunday, August 29 and 30. More than a hundred entries have been received as we go to press and in all probability there will be over two hundred starters in the thirty or more events which are scheduled. While there will be racing events during all the week beginning August 24, yet the speed boats will compete on Manhasset Bay only on Saturday, August 29th and Sunday, the 30th.

The race course for speed boats is laid out along the axis of Manhasset Bay, lying approximately in a North and South direction. The course is a straightaway, one and a half miles in length with a single turning buoy on each end, the length of each lap, therefore, being three statute miles. The Lighthouse Department has placed around the Race Course twenty-eight spar buoys to mark the boundary limits for the anchorage of the spectator fleet. These buoys will be located six hundred feet from the Race Course on each side.

The racing will open on Monday morning, when a fleet

COMPLETE RACING PROGRAM

Event No	Name of Event	Distance	Time of Start
Tuesday, August 25			
1A	Cruisers, Fast Cruisers and Express Cruisers, Tri State Yacht Club, Philadelphia to Columbia Yacht Club, New York City	230	
Thursday, August 27			
1	Cruisers and Fast Cruisers, Riverside Yacht Club, Philadelphia to Manhasset Bay	250	
Friday, August 28			
2	Express Cruisers, Sachems Head Yacht Club to Manhasset Bay	115	1:00 P.M.
3	Handicap Cruiser Championship, Manhasset Bay to Stratford Shoal and Return	78	9:00 A.M.
3A	Handicap Cruiser Championship of Greater New York	78	9:10 A.M.
Saturday, August 29			
4	Miami Beach, One Design (1st Heat)	12	1:15 P.M.
5	A. P. B. A. Gold Cup (1st Heat)	30	2:00 P.M.
6	Miami Beach, One Design (2nd Heat)	12	2:50 P.M.
7	A. P. B. A. Gold Cup (2nd Heat)	30	3:30 P.M.
8	Baby Gar Invitation	12	4:20 P.M.
9	A. P. B. A. Gold Cup (3rd Heat)	30	4:45 P.M.
10	Free-For-All Displacement Boats	24	5:45 P.M.
Sunday, August 30			
23	Manufacturer's Outboard Race (Speedster Class)	3	10:00 A.M.
11	Amateur's Outboard-Motor Championship, Class A, B, C	3	10:05 A.M.
24	Outboard-Motor Tenders	3	10:10 A.M.
25	Unlimited Outboard-Motors	3	10:30 A.M.
12	Aquaplanes	$\frac{1}{4}$	10:35 A.M.
13	Truth Race or All Classes of Boats	10	11:00 A.M.
14	Dodge Trophy (1st Heat)	12	12:00 P.M.
20	Miami Beach, One Design (3rd Heat)	12	12:35 P.M.
15	Dodge Trophy (2nd Heat)	12	1:20 P.M.
16	151 Cubic Inch Hydroplanes (1st Heat)	6	1:50 P.M.
17	Dodge Trophy (3rd Heat)	12	2:20 P.M.
18	151 Cubic Inch Hydroplanes (2nd Heat)	6	2:50 P.M.
19	Dodge Trophy (4th Heat)	12	3:20 P.M.
22	Miami Beach, One Design (4th Heat)	12	3:50 P.M.
21	International Trophy	105	4:30 P.M.

For details of Each race see pages following.

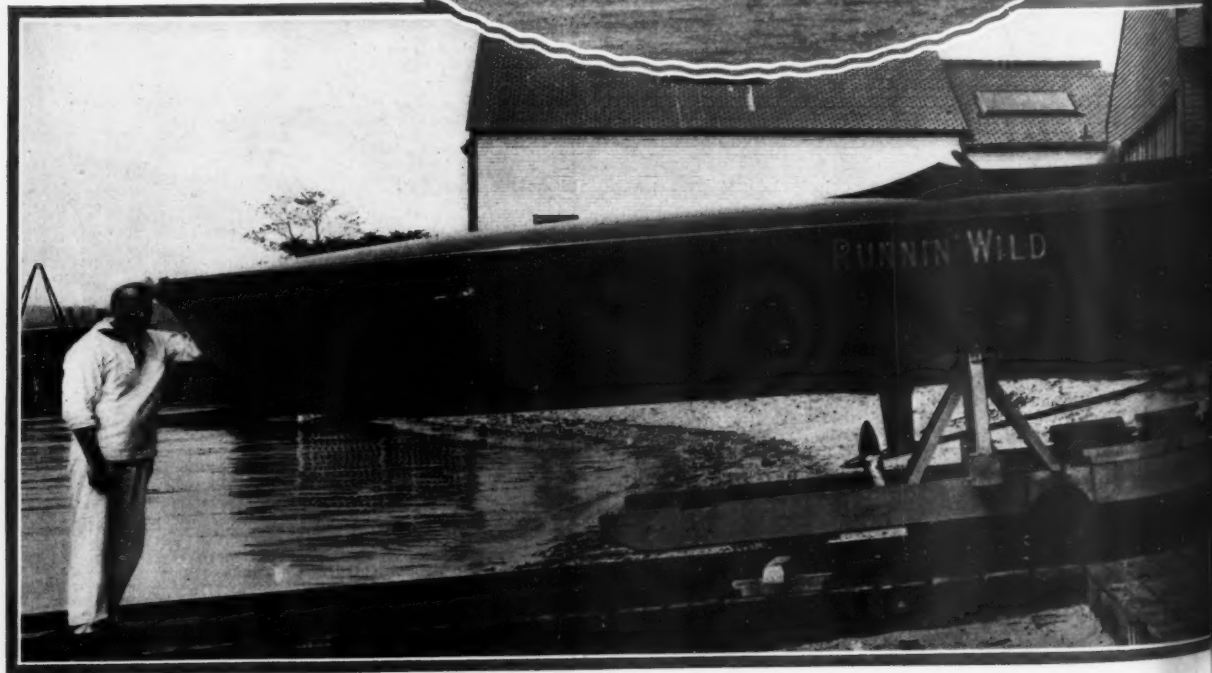


H. Alex Johnson, owner of Yankee Doodle, working on one of the two 16-cylinder 1,500 h.p. motors with which Yankee Doodle is equipped

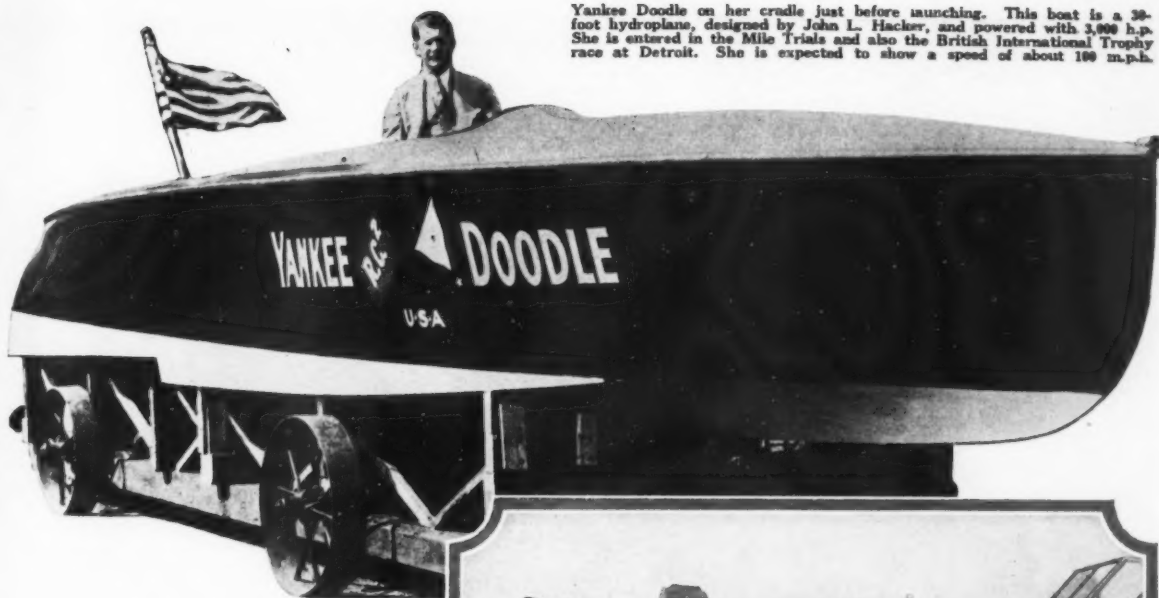
of cruisers will leave the Tri-State Yacht Club, Philadelphia, and race to the Columbia Yacht Club, New York City, a distance of approximately two hundred and thirty miles. This class will finish on the afternoon and evening of Tuesday, Aug. 25. A class of express cruisers will leave the Tri-State Yacht Club, Philadelphia, Tuesday morning, August 25, and finish at the Columbia Yacht Club on the same evening.

The next event of importance will be the Ocean Race for the James Craig Trophy. The course for this race will lie between the

Carl G. Fisher's Gold Cup runabout Baby Shadow, powered with an eight-cylinder Wright motor, which in her trial trips has shown nearly a 60-mile an hour speed

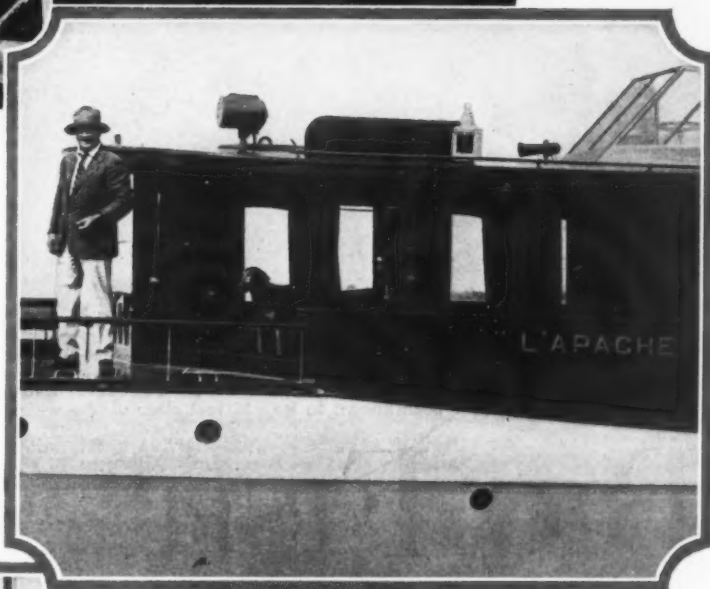


Yankee Doodle on her cradle just before launching. This boat is a 30-foot hydroplane, designed by John L. Hacker, and powered with 3,000 h.p. She is entered in the Mile Trials and also the British International Trophy race at Detroit. She is expected to show a speed of about 100 m.p.h.



Riverside Yacht Club on the Delaware and Manhasset Bay, a distance of about two hundred and fifty miles. This race will start on Wednesday, August 26, and finish Thursday, August 27.

On Friday, the 28th the race for express cruisers will start from the Sachem's Head Yacht Club, Sachem's Head, Conn., and finish at Manhasset Bay. On the same day, at 9:00 A.M. will be started the class for the Handicap Cruiser Championship of America. This race will start and finish at the Manhasset Bay Yacht Club. Ten minutes later, a class will be started for the Cruiser Championship of Greater New York. The course for this class will be the same as the class starting at 9:00 A.M., that is from Manhasset Bay to and

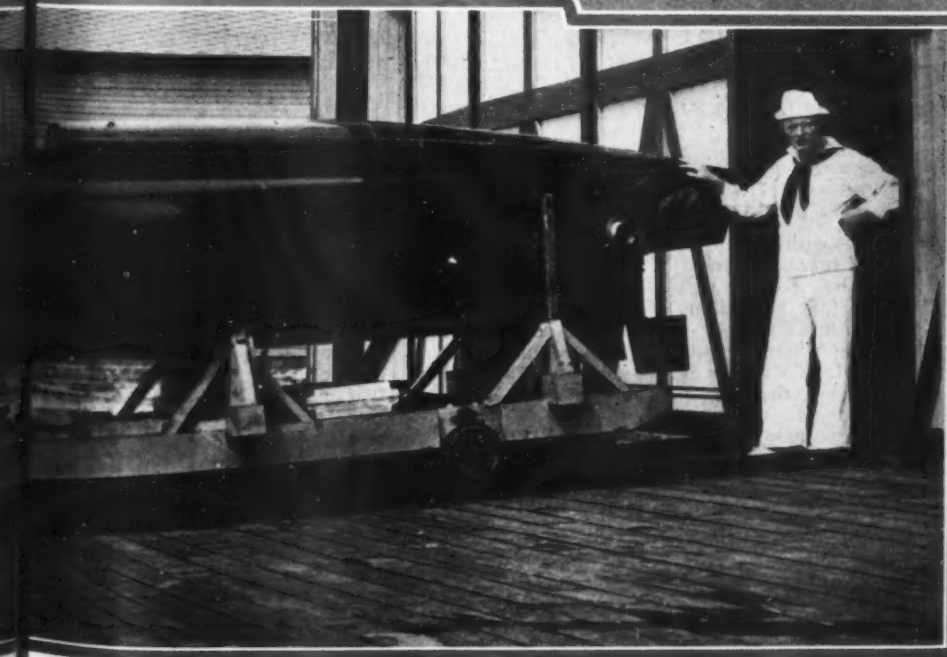


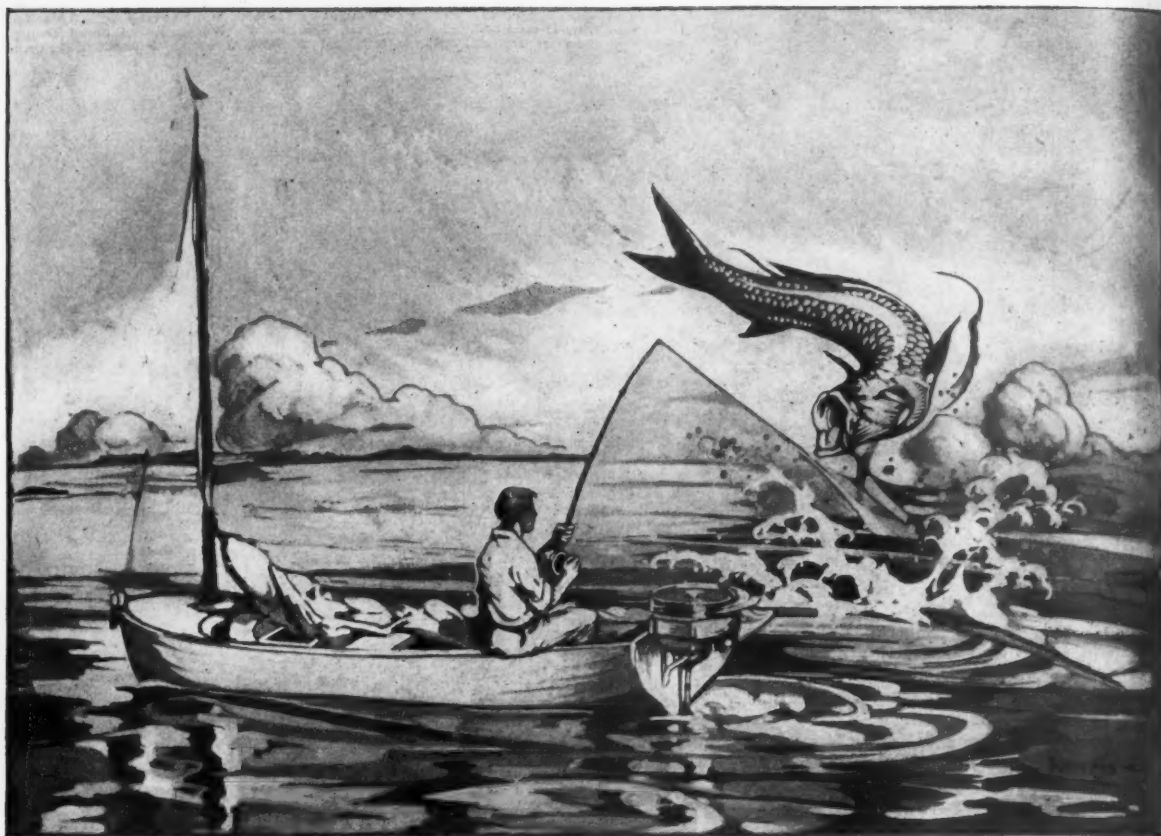
Carl G. Fisher and his dog Rowdy, aboard Fisher's cruiser L'Apache. Mr. Fisher is watching one of the tryouts on Manhasset Bay of his Gold Cup racer, Baby Shadow

around Stratford Shoal and return. Both of these classes are open to cruisers and fast cruisers of between thirty and forty-five feet in length.

The Gold Cup Regatta Proper will start Saturday, August 29, at 1:15 o'clock. At this hour, the first race for the Miami Beach One Design boats will get away. At 2:00 the first heat for the American Power Boat Association (Continued on page 128a)

Runnin' Wild, a new Gold Cup racer, owned by Caleb S. Bragg, and built by the Horace E. Dodge Boat Works from plans by George F. Crouch. This is the first tractor type boat which has been built, and her trials have proved very satisfactory





Tarpon, the Silver King, is the most energetic bit of free silver known to man. It attains a length of 8 feet and has been known to leap 12 feet clear of the water in its fight against the rod

BIG FISH *with a* Kicker

The Thrill of a Lifetime Comes When a Hundred Pound Fish Starts to Run Off with Your Bait—The Best Sport That Mortals Can Enjoy Is Fishing from a Small Boat

Written and Illustrated by

STEPHEN HAWEIS



after twenty years with your nose to the grindstone of successful business there remains a living spark of the boy in your heart, it can often be fanned into furious flame by the thought of fishing when everything else leaves it cold. To a man who habitually thinks big, the wiggle of a sunfish or the miaow of a catfish evokes but a smile of reminiscent happiness: that was the toy of unreclaimable youth; but the bark of large he-fishes clamoring for costly lures at Catalina or Florida is something else again. The way is plain before such a one. He purchases a large motor boat and equips himself with a Rolls-Royce rod and reel, with hampers of food and the services of an experienced guide. Before long he is faced with the problem of where to house the stuffed trophies and he begins to send memorial scales of mighty tarpon to his less fortunate friends.

But there are those who balk at the cost of such a

program; who do not realize that all the joy of fishing for large fish on a sapphire sea can be theirs with equipment which does not run into hundreds of dollars. If the idea of the humble kicker occurs to him, he can fulfill the dream of every honest son of Izaak Walton, to hunt the silver king and many another sporting fish. There are those who have fished for tarpon from an ordinary canoe, and records of men having lost their lives through the struggles of the giant fish too close to the craft: tales of times when the tarpon won. Men have slain lions with bow and spear and killed sharks with nothing more than a knife, but such pleasures are for the eccentric few in these days. A stout rowboat, such as is used by the Bahamas sponge-fishermen, with a lively outboard engine, will provide all the excitement anybody can wish at a low cost and without danger to life and limb. With a companion to manipulate the engine, fishing for big fish can be enjoyed with complete safety, and even more fun, than Croesus in his large motor boat ever gets. A small boat is quicker to respond



The color of the dolphin, not the cetacean but the fish called Coryphæa or Dorade, is the most marvellous thing in nature. The fin on the back is the blue of an electric flash and when dying seems to exude a tremulous cloud of gold, blue and rose color which flushes and changes instantaneously

to the tiller in emergencies, can be stopped and started more easily and rapidly, and is generally more under the immediate control of the man with the rod than any large boat ever is, when a mad hundred-weight of silver

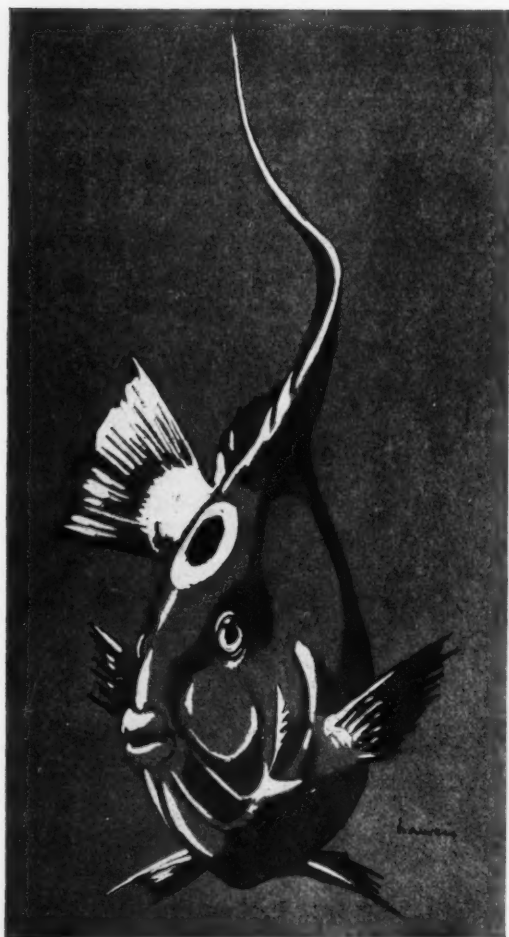
is fighting for freedom with the energy of an Irishman at the end of fifty yards of linen line. But even a companion is not absolutely essential if a man thinks quickly, is alert and alive and can make shift to use a prehensile



The great sail-fin on the back of the sail fish, is a brilliant blue spotted with a darker hue. It often rides out of water when the fish is idling on the surface. Scientists call it *Istiophorus nigricans* and assert that it is the sole representative of its genus

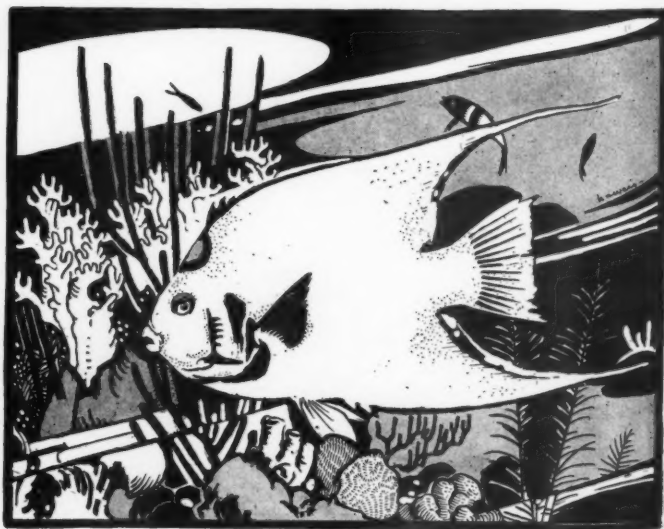


Room decoration in silver, blue and yellow, exhibited at the Mural Painters show, Brooklyn Museum, 1925. The fishes represented are: File fish, shark-sucker, nurse shark, jolt-headed porgy, pipe fish, yellow-tail and black angles

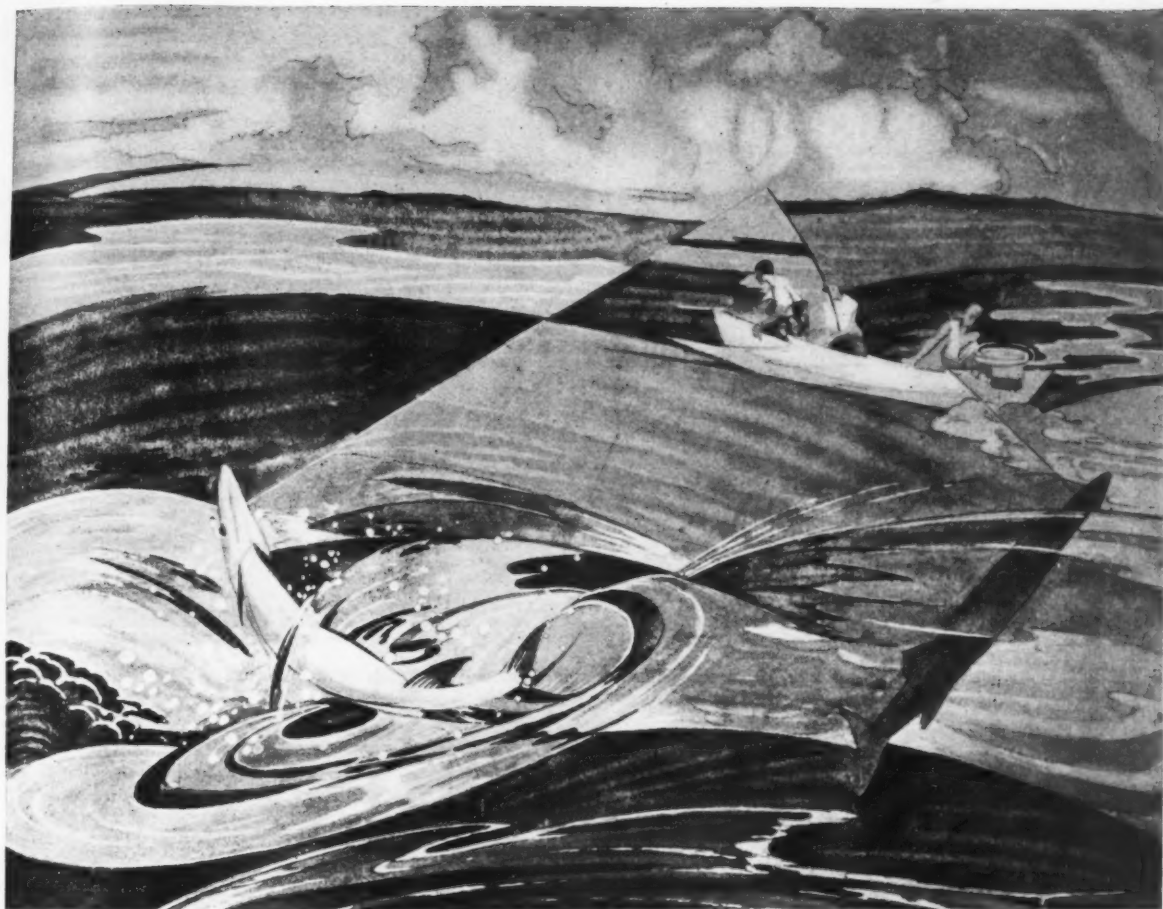


foot to shut off the motor once in a while when both hands are busier than a woodchuck with an airedale. It can be done, and there is an added sense of triumph, though it does not show in the photograph afterwards, which more than compensates for the lack of a hundred horsepower engine and the sleek mahogany fittings of the millionaire boat. Naturally, an outboard engine must be a good one, and it is especially necessary to have one designed for salt water, because the southern waters seem to be far saltier than the northern seas, and it is incredible how quickly steel will rust in it. Nuts and washers melt away, almost overnight, and the sensation of losing the propeller at the critical moment with three or four miles to scull home, is not one which anybody who has once enjoyed it is anxious to repeat. It is little satisfaction to be able to see your lost propeller reposing upon a coral bed thirty feet below the keel, as you very often can, in the incredible Bahama waters.

Another merit of the boat with a kicker is that one can creep up shallow creeks and through openings in coral reefs



The Angel fish is the ballerine of the sea. Its shimmer of gold, orange and blue is like nothing on earth so much as a Mexican opal. One species wears a wide black halo on its brow in which a turquoise patch speckled with black is set



The Hound fish with its long blue beak fretted with sharpgreen teeth chews and twists the bait until it is in a right position head first, to be swallowed

which a large boat cannot possibly negotiate, and there are often good fish to be found in shallow waters. When you are tired of catching big fish in the blue water, it is distinctly pleasant to change to a light rod and catch colored miracles, amazing creatures in butterfly raiment of a dozen varieties, in the white waters, that is, those vast stretches of shallow sea and white sand in which you find groups of coral rocks. With a glass bottomed bucket you can watch fish in two or three fathoms of water, choose your fish before you cast, drag your bait before him and away from others that you don't want, and strike when you see your quarry close his jaws upon your bait!

The fish you catch in this way are not large, seldom over twelve inches long, but they are a revelation in

color to the lover of beauty and not without merit when viewed obliquely in the frying pan. The tarpon, amber fish, barracuda and some others are not to be recommended for indiscriminate eating. Some are liable to be poisonous and most big fish are coarse and tasteless, never as good to eat as the bait you catch them with.

I have said that the extreme expense is not necessary. Let it be granted at once that for the biggest fish the best of everything is not too good. "Canst thou draw out Leviathan with a hook?" No, not yet: the two or three hundred pounder is going to get away in nine cases out of ten. The strongest tackle in unskillful hands does not help very much. But, though there are great fish which can be subdued with a medium rod and a six or nine-thread line, there are none (Continued on page 100)

The Barracuda is like a silver pickerel with rabies and a mean disposition. It has knife-like teeth as large as a terrier's and grows to about eight feet. It will attack anything with the enthusiasm of an uplifter and when hooked usually jumps once and no more, probably at the end of its first rush





Mr. Freeman's boat and engine hauled out on the beach at Epoufette

By **W**ater ways to **GOTHAM**

Part VI

A Battle With the Elements in a Small Boat During a Driving Storm in Shoal and Rock Infested Waters, Gives the Author Some Thrills and Action Which Were Not Scheduled on the Original Program

By **LEWIS R. FREEMAN**

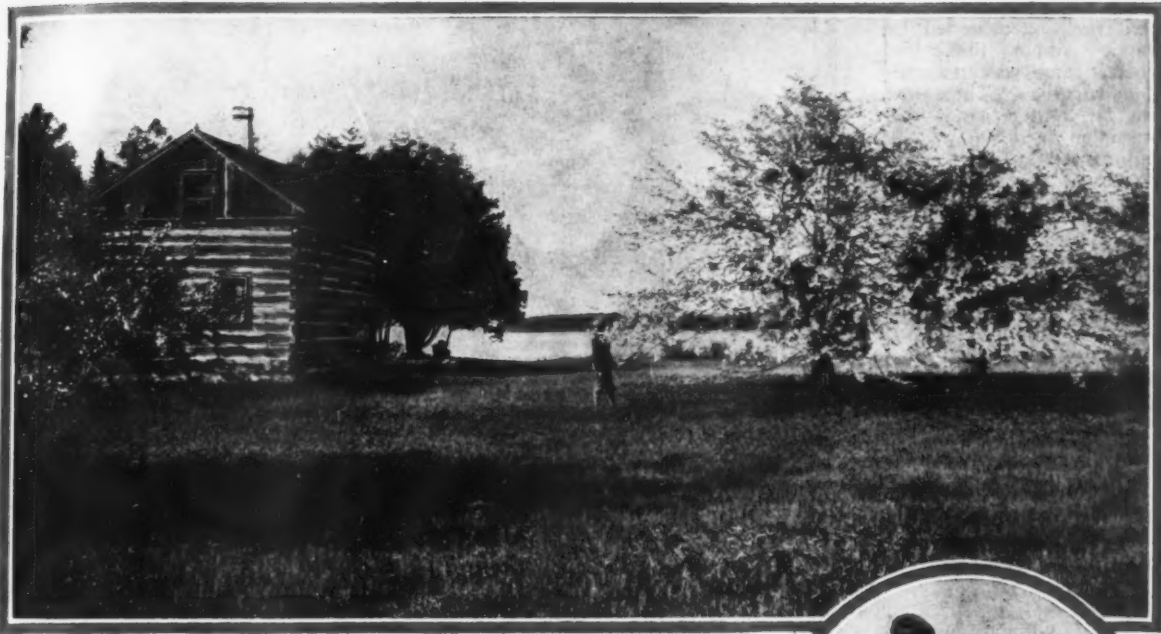
On a Lee Shore

I HAVE never been able to identify beyond all doubt just which one of the Thousand Rascals it was that tried to block my way. My large scale chart of this section of the north coast of Lake Michigan, soaked to a pulp, had gone overboard in fragments via the bailing bucket. A smaller scale chart which survived showed, on subsequent inspection, that the two shallowest patches of the inner reef of the Mille Coquins had three and seven feet of water respectively. The actual depths in both cases would have been a foot or two less than those given, due to a lowering of the general level of the lake by the Chicago Drainage Canal since the printing of the chart. Neither reef was shown in sufficient detail to give the variations of its soundings save in somewhat blurred contours, and these were not clear enough to indicate whether either one was threaded by a channel. That I was headed into what was at least the beginning of some sort of passage, however, presently became evident.

With the boat driving along fairly comfortably in com-

paratively evenly running seas while the breakers were combing over and cracking their heads against solid rock less than a hundred yards off either beam, I began telling myself that my old friend, "The Sweet Little Cherubim that sits up aloft," was climbing down from his perch and getting ready to intervene for me again. It was certainly by no navigational skill of my own that I had hit the hole in what had appeared to be an unbroken line of breakers. Where an attempt to steer more than a point or two off a course directly before the wind and waves would have meant speedy swamping, there was nothing to do but drive ahead. This I had done, and with no more sanguine hope than that the worst would be only an upset, leaving me something substantial to cling to, rather than complete disintegration against the rocks of the uncovered reef.

And yet here I was, while nothing but frothing comb-ers thundering across black rocks showed to left and right, teetering along somewhat dizzily, it is true, but



Log house and flowering orchard at Epoufette, on the north coast of Lake Michigan

still under rather better control than among the waves of the more deeply submerged shoals outside. As line after line of breakers was passed without any perceptible contraction or shoaling of the channel through which I raced, the hope grew that I might still drive through unscathed what was probably the most formidable barrier I could expect to encounter. Hope strengthened to confidence as a decided weakening of the force of the waves became apparent, and confidence stiffened to conviction when, from the vantage of the foaming crest to which the boat was momentarily lifted, I caught transient glimpses of quiet water less than a hundred yards ahead.

Racking my brain to account for this unexpected lagoon of refuge, I all but overlooked the more imminent wall of tumbling white that held the solution of the mystery. The bow was shooting skyward up the back of a roller that was curling over onto bared reef beyond before I realized that the haven of my hopes was formed by an unbroken barrier of rock which effectually fended it from the attacks of the in-rushing seas. The passage through which I had been driven was a "cul de sac," a blind alley completely closed by a barely submerged wall of reef that cut it off from the lagoon beyond.

A table of green-black rock, streaked with runlets of foam from the preceding wave, seemed rushing up to meet the bows as the boat toppled over the crest of the breaker and plunged downward. My mental reaction could not have been very different from that of a man diving from the top of a skyscraper toward an asphalt pavement. I flattened down to

Lubricating the gears with a grease gun. This was done about every fifty miles for the whole voyage



Fishermen icing their catch at Nauvauway

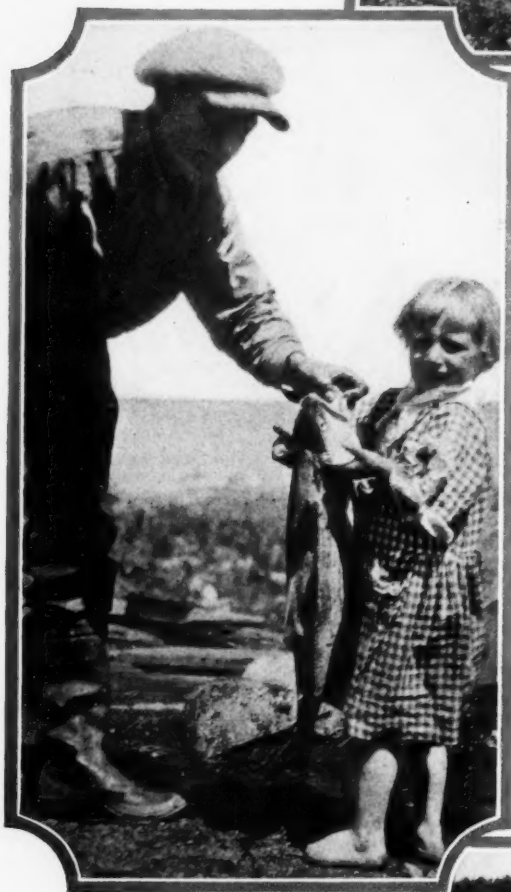


avoid the solid impact of hard rock uncushioned by water. And so the crash, when it came, was an agreeable surprise. The blow was far lighter than I had braced myself, physically and mentally, to meet, while in place of the expected shivering of torn wood there was only the muffled rasp of metal. The breaker had put down enough water to shoot the boat on across the barrier to the quiet lee of the reef without touching her keel.

The blow that the boat herself had missed by a hair



A simple hut of a fisherman on Naubinway Bay



A single fresh white fish makes a good lunch for a family

The lakes fishermen unload their catch in wooden tubs



had fallen with full weight upon the Elto motor. Saved from annihilation by its automatic tilting device, and from being knocked off into the water by the grip of clamps deeply countersunk into the oaken stern, the little kicker's crescendo shriek seemed to tell beyond doubt of a wound to the death. A buckled shaft and a lost screw were about the worst that could happen; a sheered propeller-pin the least. It might as well be one as the other, I reflected gloomily, for even the simplest repairs were out of the question with the boat wallowing gunwales under in the least turbulent spot I had yet run into.

Administering the painless anesthesia of a disconnected battery to the screaming motor, I got out a spare oar to replace the one lost, and worked the boat round to head into the wind, the force of which, now that I was no longer running before it, I became conscious of for the first time. Then, with an occasional steadying stroke, I bailed out the water and did what I could to retrim such of the load as I could reach without leaving the rowing thwart. Finally I rubbed the water out of my eyes and reared up on sprawling legs in an endeavor to get some sort of an idea of the lay of the lake and what it portended.

The greatly increased speed with which the boat had been driven over the several miles of shoals had furthered my landward flight beyond all expectations. The nearest segment of the forest-wall was not over five miles away; that to which I would be carried through the necessity of running dead before the waves perhaps a mile farther. The distinct line of gray-brown beach showing below the trees had more the look of rock than sand. As the foreshortened wave crests made a mass of unbroken white beyond the narrow zone of comparative quiet in the lee of the reef, it was impossible to form any idea as to how far out from the shore the breaking surf was running.

The best—indeed, the only—thing to do appeared to continue my shoreward run under oars. I decided to try it first bow-on, just as I had been doing with the engine. If unable to keep the fol-

(Continued on page 106)

IGNITION

A Boys' Story of ENGINES

Part IV

By

Alfred F. Loomis

What Makes the Spark Plug and Why It Takes Place—An Answer to Possible Questions on the Electrical Equipment of Both the Two and Four Cycle Types of Engines Prepared Particularly for the Boys, and Written as Simply as Possible. Will Also Prove Instructive to Many Adults

WE have already referred several times to the electric spark which occurs in the combustion chamber and sets fire to the explosive charge of gas. Having learned how the carbureter forms this explosive mixture, it is now time to examine the means by which the electric spark which fires it is produced.

There are two forms of electric ignition systems in general use of marine engines. One of these is the high-tension or jump spark, which employs a spark plug for producing the spark, and the make-and-break system. The jump spark system is now used on a majority of marine motors as well as on all automobile and truck engines.

The Jump Spark System

The various parts of the jump spark system are the battery or magneto for delivering the electric current; the coil for intensifying the current; the timer or distributor for delivering the current to the proper cylinder at the proper time; the spark plug, and the necessary wiring and switch.

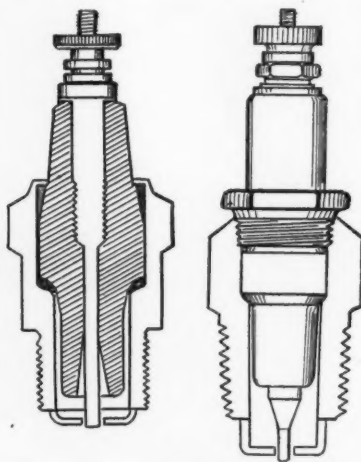
On small and inexpensive motors, battery ignition is generally used. The source of current here is either a set of dry cells such as are used for electric bells, or a storage battery. One practical difference between the two types of batteries is that the storage battery may be frequently recharged and used for several years, while

the dry cells run down after a short period of use and have to be replaced. However, by using two sets of dry cells alternately, they will often last an entire season. The comparative cheapness of dry cells is a point in their favor.

On more expensive motors, as well as on outboard motors, a magneto is used to supply the current for ignition. This is an electrical device which is operated by the engine. Engines which are equipped with magnetos frequently use a battery for starting, since the battery gives a hotter spark at low engine speed. There are many magnetos, however, which develop a spark hot enough to start the motor direct.

On the modern high-speed motor, the battery is again used for ignition. With these motors a generator is supplied to manufacture current for charging a storage battery which starts the motor and lights the boat. Since with this equipment there is always an ample supply of current available, there is no need for a magneto.

The coil in a high-tension system consists of a core of soft iron rods, around which are wrapped two separate windings of insulated wire; a vibrator; a condenser, and the necessary terminals to which the wires are secured. The first winding, known as the primary winding, leads from the battery around the core to the vibrator, from which it is grounded back to the battery.



Sectional view of spark plug with removable porcelain insulator

and magnetizes it. The core immediately draws the vibrator toward it and breaks the connection with the stationary tip. As soon as this connection is broken the current stops flowing and the core becomes demagnetized. The springiness of the vibrator thereupon draws the movable tip back to its original position, and the current flows again, remagnetizing the core. This vibration continues with great rapidity as long as the current is permitted to flow.

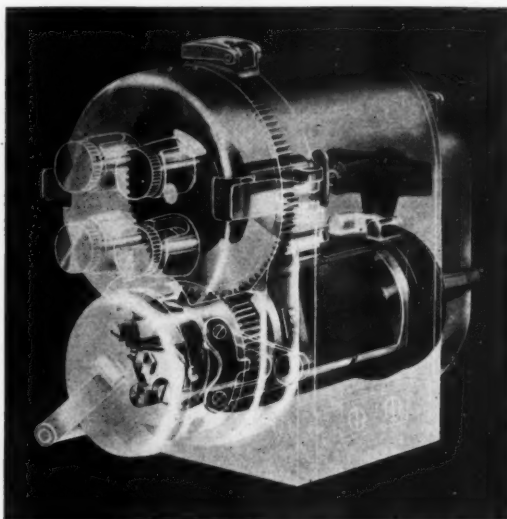
The condenser consists of several sheets of tinfoil, insulated from each other, through which the current flows. Its purpose is to prevent burning of the platinum points as they make and break contact and to help intensify the current.

The vibrator is a piece of springy steel with a tip of platinum alloy. Platinum is used in preference to other metals because it is less easily burned. When there is no current flowing through the coil this platinum tip rests lightly against a stationary platinum tip which is connected to the wire leading back to the battery. But when the ignition switch is turned on, the current from the battery flows around the iron core of the coil

Now, every time the vibrator breaks the connection in the primary circuit, a high-tension current is induced by magnetic action in the secondary winding. Although the two circuits are insulated from each other, the act of breaking off the first current manufactures an independent, intensified current. It is this secondary, high-tension current that is carried to the cylinders to ignite the explosive mixture.

The coil, by the way, is a very delicate instrument and should never be pried apart for inspection. It may be tested to find out whether it is in working order, but we must take on faith the somewhat mysterious way in which it induces the high-tension current.

Unlike the coil, the timer, which is the next instrument in the process of supplying current to the cylinders, may be uncovered in order to gain a clear idea of how it works. Its purpose is to regulate the flow of current through the coil and deliver it to the combustion chamber at the proper time. The one which I am about to describe is used on a two-cylinder, two-

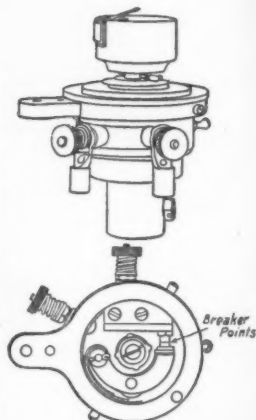


Phantom view of a high tension magneto showing rotating distributor, circuit breaker, and other parts

cycle engine. Other timers have different features, but the principle is the same in all.

This timer is mounted on the forward side of the front cylinder. It consists of an outer shell, an inner member of fiber, a rotating arm with necessary springs and connections, and a removable cover. The fiber member, a non-conductor of electricity, is in the shape of a shallow cup, with the wall perpendicular to the bottom. Imbedded in the wall and opposite each other are two metal segments. Each of these segments is connected by wire with the primary winding of a high-tension coil—one coil for each cylinder.

In the center of the fiber disc is the rotating arm, or rotor, which is revolved by a vertical shaft geared off the crankshaft of the motor. The rotor, which is grounded, has a metal roller at its tip which rolls around



Typical circuit breaker and distributor. The head with wires to spark plugs is not shown



Variety of spark plug point arrangements, each adopted by different manufacturers

the inside of the cup and makes contact first with one segment and then the other. The current being turned on at the switch, when the rotor touches the first segment it closes and then opens the circuit through number one coil. This permits the vibrator in the coil to buzz and induce the high-tension current at the exact instant when it is needed in

(Continued on page 68)

Chesapeake Bay Entertains

Edward Buck and
F. G. Ericson, start-
ers in the races of the
Miles River Yacht Club
St. Michaels, Maryland

Photographs by M. Rosenfeld



William Bigelow's Hall-
Scott powered Bob-o-
Link which won most of
the events at the St. Mi-
chael's Regatta, August 7
and 8. These races were
attended by hundreds of
yachtsmen from Wash-
ington, Philadelphia,
Baltimore and Chesapeake
Bay points

Start of the race for the
one design boats built by
the Chance Marine Con-
struction Co., of An-
napolis, Maryland. All of
the craft are powered with
Scripps motors. These
boats are stock 32-footers,
which are being con-
structed in quantity by
the builders



Photographs by M. Rosenfeld

NASHIRA, T



An unusual new boat built for Richard F. Hoyt, the Broker-Sportsman of New York City, by the Consolidated Shipbuilding Corporation of Morris Heights. Mr. Hoyt is also the owner of Teaser, the fast Wright engine runabout, which recently beat the time of the Twentieth Century Limited, between New York and Albany by covering this stretch between the cities in two hours and forty minutes

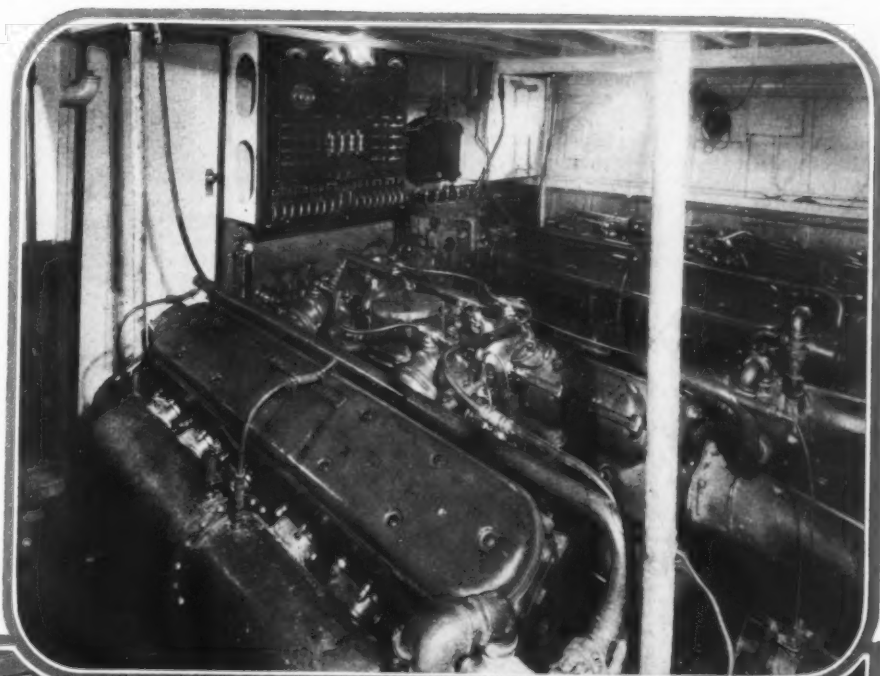
For a boat with the tremendous speed possibilities of this one, the accommodations are marvelously complete, and comfortable. The interior of the deck saloon is a spacious apartment with built-in settee at the after end, as well as a built-in radio set with an accompanying phonograph adjacent to it. By reason of the large window space in this room, it is a decidedly cheerful room



The Speediest Houseboat

The power plant which consists of two twelve cylinder, four cycle Wright marine engines, of 5¾ inch bore and 6¼ inch stroke, will develop upwards of 1,000 h.p., which is sufficient to drive this boat at over twenty-five m.p.h. This innovation of driving a large, roomy houseboat at high speed will be watched with interest

The boat itself is 81 feet in length, with a beam of 14½ feet. It is a large and solidly constructed craft, which affords ample space for the owner and his guests, as well as for a sizeable crew. The forward end of the deck house encloses the dining table and built-in buffet



To Gloucester on B

LONG distance racing has a way of bringing out valuable pointers on the navigation, handling, and what-not of small craft, and the Larch-race of July 26 was no exception. Knowing that MoToR Boat-keenly interested in odd (the odder, the keener) ing after the event ing choice tidbit

A friend of mine rarely boatless, se on one of the sloops in the race. On after the start this

who is tempo- cured a berth that took part the morning friend, going

on watch in a thick fog, asked the owner where he kept the headline, if he happened to have one. There was some-

thing in the way my friend put the question that touched the pride of the owner. He replied that of course he had a headline.

He wouldn't think of going anywhere without it, fog or no fog. It was almost a reflection on his seamanship to imply that

Nahma, the winner of Class B yawls



Mystic, winner of Class C schooners, owned by P.R. Malory



Blue Water

*Deep Water Men Who Found the Race to
Bermuda an Easy Adventure, Experience
Many Thrills on The Way Down East*

By Alfred F. Loomis



The crew of
Mystic at ease
just before
the start

he didn't have such an important article of navigating equipment. If my friend wanted it, the line was in the locker near the companionway, right where anybody could get it in a hurry.

My friend told me that he produced the lead and line. In relating the incident, he paused there for dramatic effect and then said, "Al, how long do you think that line was?"

"I couldn't guess," I replied, coyly. "Say eight fathoms."

"Another guess," said my friend.

So I guessed twenty fathoms.

"Wrong again," said my friend.

"The boat draws 6 feet of water and the freeboard at the helm is 2½ feet. Now can you guess how long the leadline was?"

Sequoia,
the winner of
Class
SD



"I give it up," I replied. "I know a man who is a bear at puzzles. Shall I page him?"

But my friend wouldn't let me page the expert. The line, he said, had a little loop in the end of it so that the owner could dangle it over the side without fear of losing the lead. Exclusive of the loop, the line was exactly $8\frac{1}{2}$ feet long!

Since this information was given me I have studied over it for several hours, covering page after page with diagrams of sloops, rowboats, and sand bars. But in spite of all my figuring I can't make out why the leadline was $8\frac{1}{2}$ feet long. If it was intended for use before the sloop had taken the ground, it seems to me that it was six inches or so too short. If, however, it was used only after the sloop

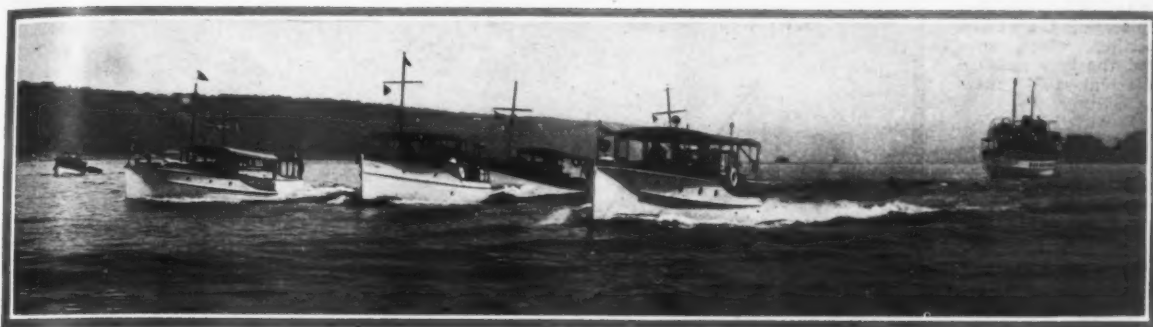
had fetched bottom, then it was a foot and a half too long. To be a useful accessory after the fact, the length of the line should have been only draft plus the freeboard of the dinghy that was used for taking soundings.

Leaving this problem unsolved, I now turn the reader's attention to another important feature of yacht piloting—the patent log. Some years ago a commander in the regular Navy gave me his very emphatic opinion of patent logs. He said that except under certain conditions (which conditions I have since forgotten) they are a snare and a delusion. He said that if you use a log you simply can't help trusting it, but that you should never trust the log unless you can ascertain your position by cross bearings. He added that if I couldn't navigate without a log I'd better resign from the U. S. N. R. F. In order to abridge the history of
(Continued on page 94)

Countess, a new schooner owned by L. Gordon Hamersley

Below, the start of one of the schooner classes.





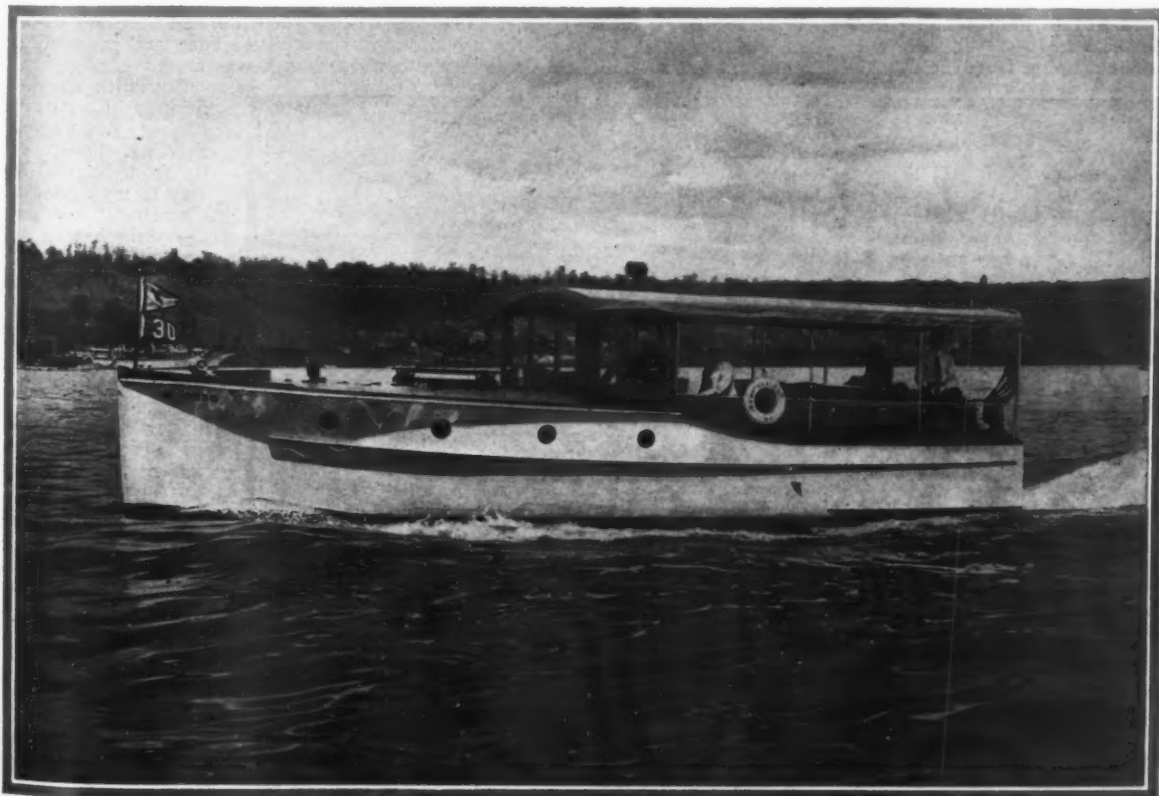
Closely bunched just after starting for Scotland Light. Commodore Heilner's flagship Irwin in the background

Baby Claire Wins Again

Colonial Yacht Club Race to Scotland Light Brings Out a Big Fleet of Fine Cruisers in Competition for the Sterling Trophy

WHY is it that the term ocean race has such a pronounced tendency to scare motor boat operators? After successfully staging one of the biggest and most enthusiastic motor boat events ever held, the Bear Mountain Handicap, with thirty boats entered, the Colonial Yacht Club scheduled its Scotland Light-ship Ocean Race. Equally many boat owners had expressed a willingness to take part in this event. Had all

that promised kept their word, fully twenty-five boats would have been in this event also. The Race Committee of the Colonial Yacht Club, headed by Henry Clay Foster, had worked long and diligently, and had prepared for a record-breaking event. On the day before the event, things changed rapidly. First one, then another boatman telephoned his excuses, and each one had a brand new excuse as to why he had to stay out of the



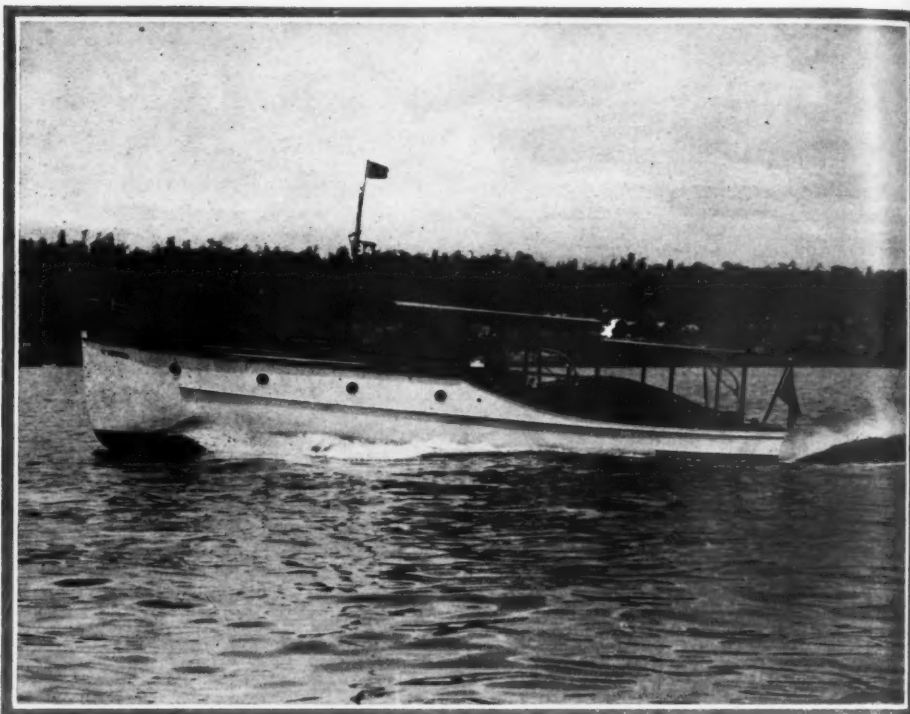
Baby Claire IV, Captain Borick's smart cruiser, which won the race on corrected time

Starlight, the fast cruiser of Captain Sterling, which covered the fifty nautical miles at 10½ knots

race. When the declinations had all come in, it was found that only thirteen boats remained to take part in the contest.

An ocean race, particularly such an easy event as a run down through New York Harbor, and a very slight look at the ocean at Scotland Light, can hardly be a severe enough test to scare anybody out of a race. Neither can the traffic on a busy river be called a bar to a good navigator. Harbor steamboat pilots know the rules of the road, and will heed whistle signals when properly given. There is certainly far less danger in taking a motor cruiser through the densest river traffic than there is in crossing Fifth Avenue at any busy corner. It is a well known failing among many motor boat owners to keep clear of the river traffic for no good reason at all. On the Hudson River in particular, many will persistently sail up the Hudson, opposing the strong tides both going out and returning home, rather than venture down into the harbor.

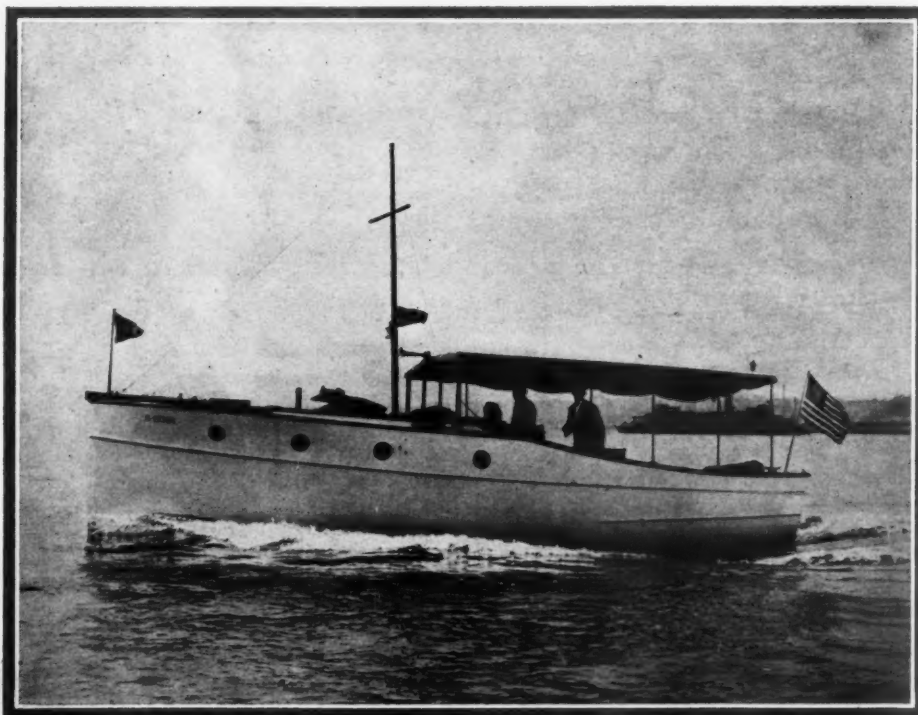
The distance from the Colonial Yacht Club to Scotland



Light Ship and return was computed as fifty nautical miles. Due to tidal conditions, the start of the race had been set for 12:00 noon on July 19, and since the day was a typical July sample, the course for the entire distance was as smooth and quiet as the lake in the park. Hardly a ripple disturbed the surface of the river when the race began. Irwin, the big new houseboat of Commodore Heilner of the Colonial Yacht Club, had been moved out into the river to act as committee boat, and promptly at 12:00 o'clock the starting gun was fired.

Starlight, the fast Scripps powered cruiser of Captain Sterling, had come up from Sheepshead Bay to try again. A discrepancy had been found in her rating, so that she was more nearly scratch boat than previously. Shadow, Commodore Joy's cruiser from Yonkers, appeared and started gamely, although laboring under the handicap of a cracked water jacket. Baby Claire IV, owned by F. V. Borick, winner of the Bear Mountain Handicap, took part and started off with a merry party of guests, as did practically all those in the race.

(Continued on page 66)



Cleo, the 32-foot cruiser owned by R. Raubitschek, was second on corrected time

Cruising *with* RADIO

*How a Cruise Developed From a Small Beginning and
Some of the Advantages of Carrying a Radio Set on the*

Vacation Cruise
By W. F. Crosby

THE whole thing started out to be a canoe trip, then graduated into the putt-putt class and finally wound up with the purchase of Spendthrift II and a real cruise de luxe.

Spendthrift II, as you probably already know, came in second in the Cruiser Championship of America, and also won the Block Island Race three years running. Even with all her racing records, though, she is a mighty comfortable 48-footer and capable of reeling off her twelve miles an hour day in and day out. A four-cylinder Van Blerck furnishes the power.

She is of the usual bridge-deck type, having sleeping accommodations for two forward and for four more aft. A compact galley with plenty of room for pots and pans and an icebox capable of handling one hundred pounds

The little portable radio receiver which functioned perfectly and could be set up wherever desired



of ice, completed the equipment.

Personalities are always more or less of a bore, but for the sake of the story it is necessary to briefly describe the members of the crew who made the trip.

First there was Gene. It was through his father that the boat was purchased, and had it not been for Gene this story would never have been written. Gene's sidekick and business associate was Mel. He was the musical genius of the trip and also turned out to be quite a chef. Then there were Eli and Bill, the two members of the crew who did most of the heavy sleeping.

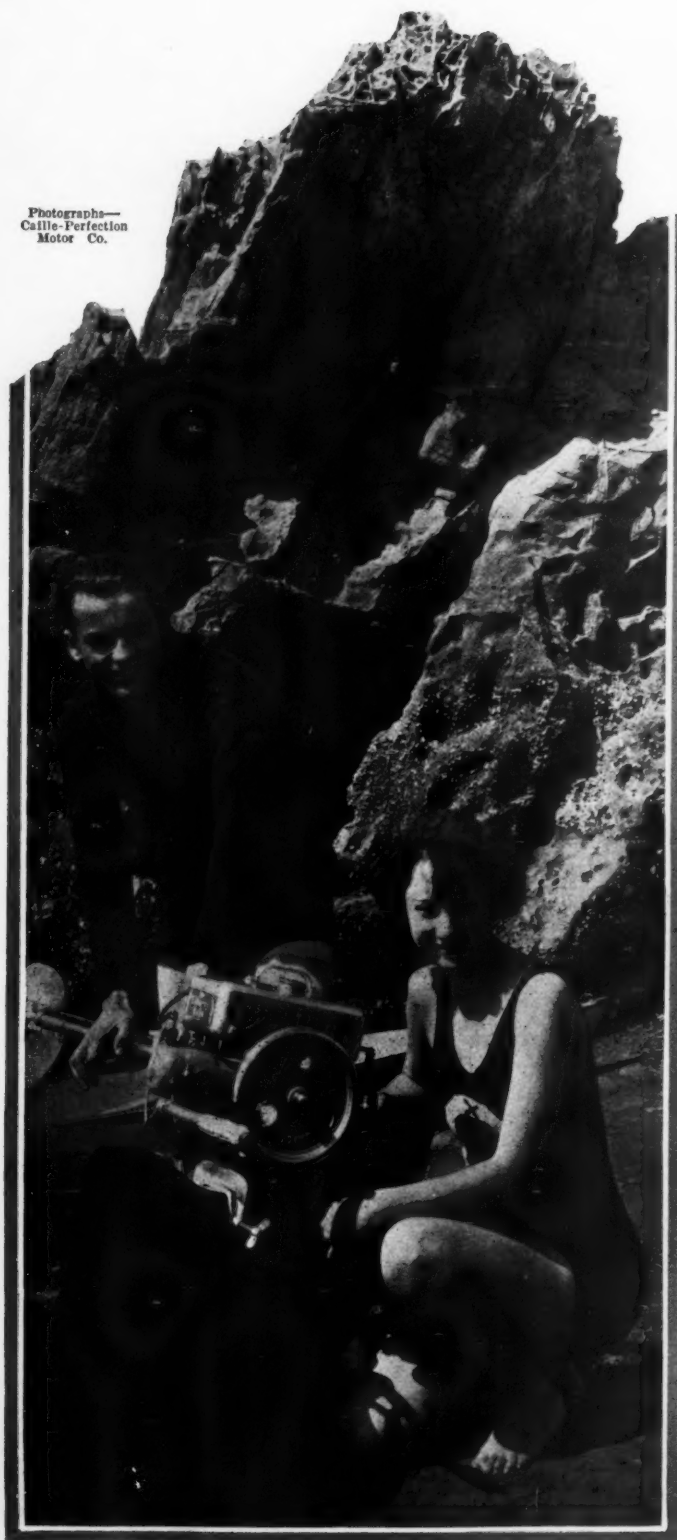
Of course, ye scribe made the fifth member and since radio is his middle name, he must bring along a new model portable receiver which, incidentally, gave an excellent account of itself. Then
(Continued on page 88)

Spendthrift II, at the end of her cruise and at her new home anchorage in Haverstraw Bay



When Outdoors Calls

Photographs—
Celle-Perfection
Motor Co.



*The Joys of Nature are Yours
Portable Engine to Help You
Spots As Well As Carry Your Gear*

The bathing beach at Balboa Bay, is far enough away to make it a long pull at the oars. A small outboard engine easily attached to the back of the row boat converts it into a speedy motor boat and brings the best beaches and most picturesque scenes within easy reaching distance. The useful range of a rowboat is more than three times as great when the oars are replaced by the gasoline engine, which needs no rest and is not disturbed by wind or tide



LET'S GO.

*You Have a Sturdy Little
Up Week Out the Hidden Beauty
ry Year Off for Hunting and Fishing*

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In the early fall when the ducks begin to migrate, remember that the little outboard engine is always ready to make a speedy run in the early morning to the best shooting points. It is well known that a better day can be obtained far away from the crowds

When it comes to catching fish, why the little engine is of invaluable assistance. For trolling the areas where the big fish abound, the little engine will slow down to a walking pace, while the hands are left free to handle the rod and land the prize of the season



Miss Brown WIN



Start of the third and last heat of the 151-inch class, showing how poorly Miss Brown got the first place, and held this commanding position throughout the race.

Canadian Challenger Plays a Lone Hand and Succeeds in Taking Famous Trophy From Jamaica Bay Defenders

By F. W. Horenburger

Surveyor, American Power Boat Association

THE large crowd of spectators who wandered down to the Regatta of the Bay Head Yacht Club at Meadowmere on Jamaica Bay, August 8 and 9, received full value for their journey. Thrills followed one another in rapid succession, and many times it seemed that some of the fast little 151-inch hydroplanes would come to grief in attempting to gain an advance the turns. The chief attrac-

Photographs by M. Rosenfeld



N Against Big Odds



own got at the first turn, however, she managed to slip into position about the remainder of the heat

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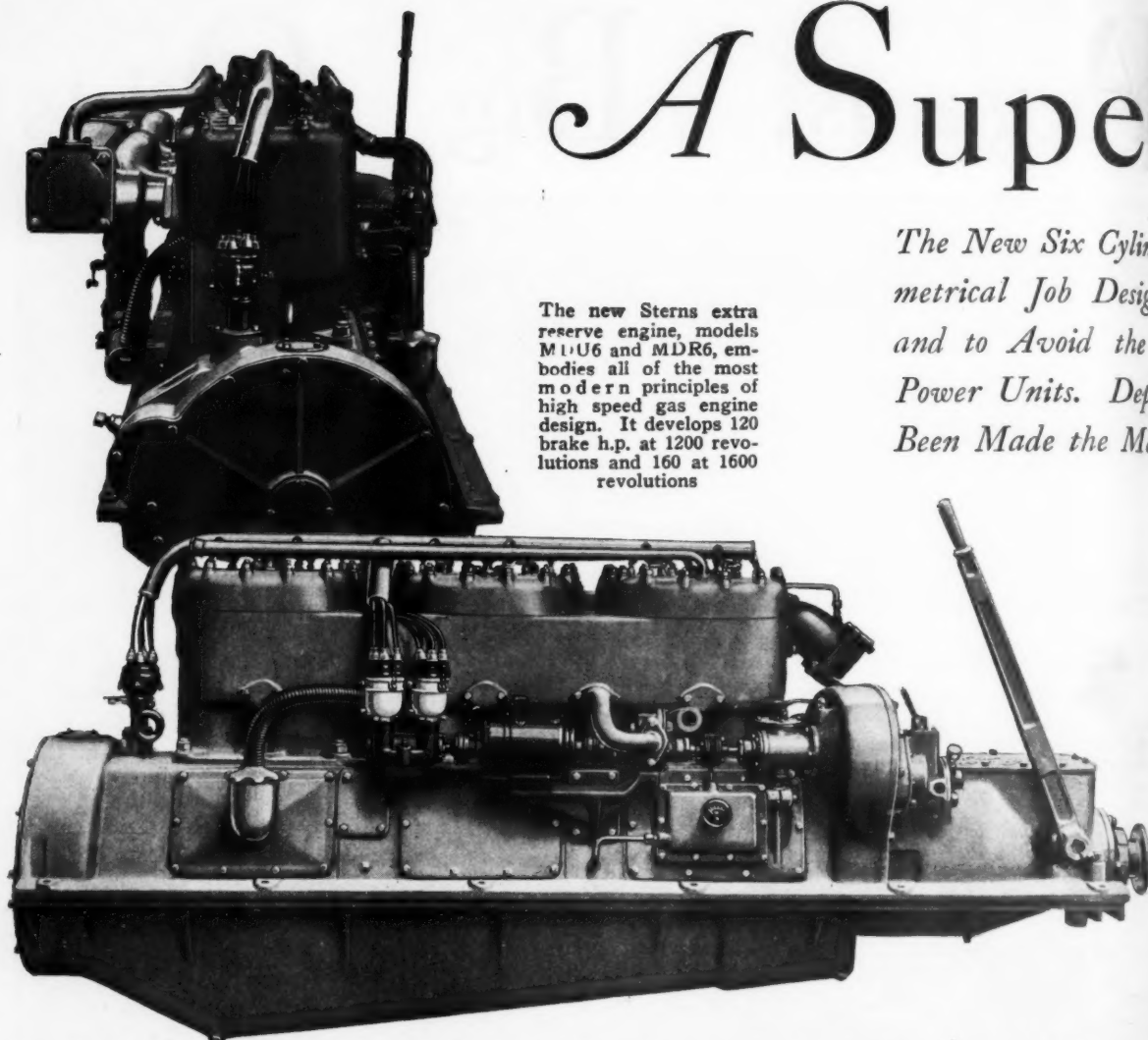
tion of the meet was the competition of the 151 cubic inch class for a handsome bronze trophy presented by *The Rudder*. This trophy was offered through the Mississippi (Continued on page 96)

Miss Brown and E-Nee-Mo fighting it out for first place

Chris Ripp
at the wheel
of his hy-
dro plane



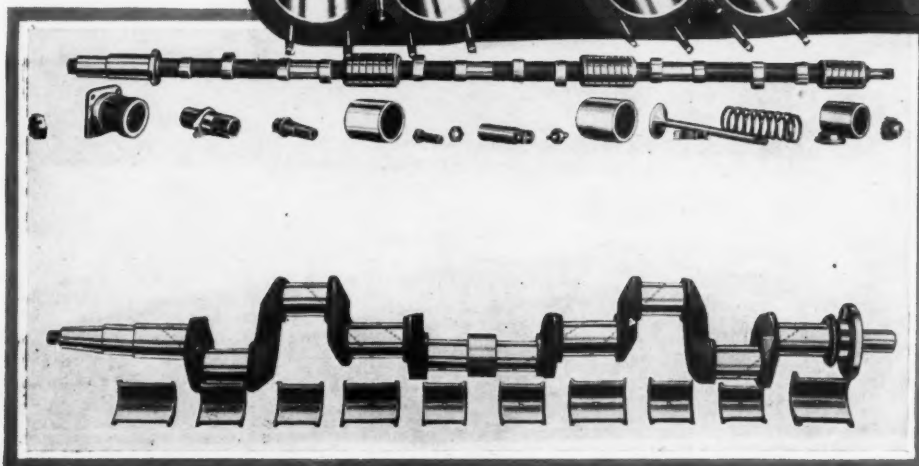
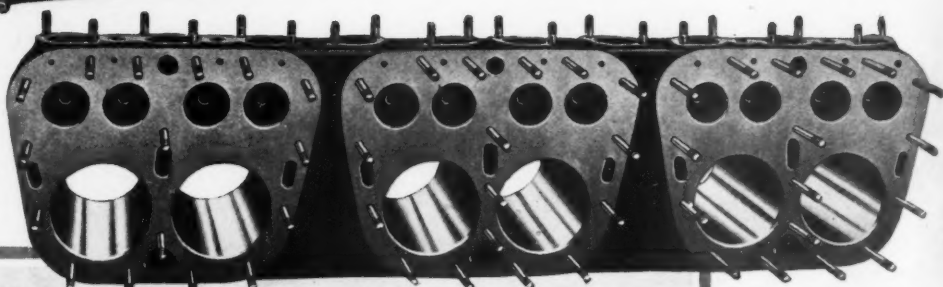
A Super



The new Stearns extra reserve engine, models M1U6 and MDR6, embodies all of the most modern principles of high speed gas engine design. It develops 120 brake h.p. at 1200 revolutions and 160 at 1600 revolutions

*The New Six Cylinder Stearns
metrical Job Design Partic
and to Avoid the Usual L
Power Units. Dependability
Been Made the Major Consi*

The total weight of the machine with aluminum equipment is 2,100 pounds, and with cast iron 2480 pounds. The cylinders are cast in a single special semi-steel casting, thoroughly seasoned to overcome internal stresses



The cylinder block is covered with three individual semi-steel head castings, each secured with seventeen generous nickel-steel studs. This single casting ties together the two major parts of the engine.

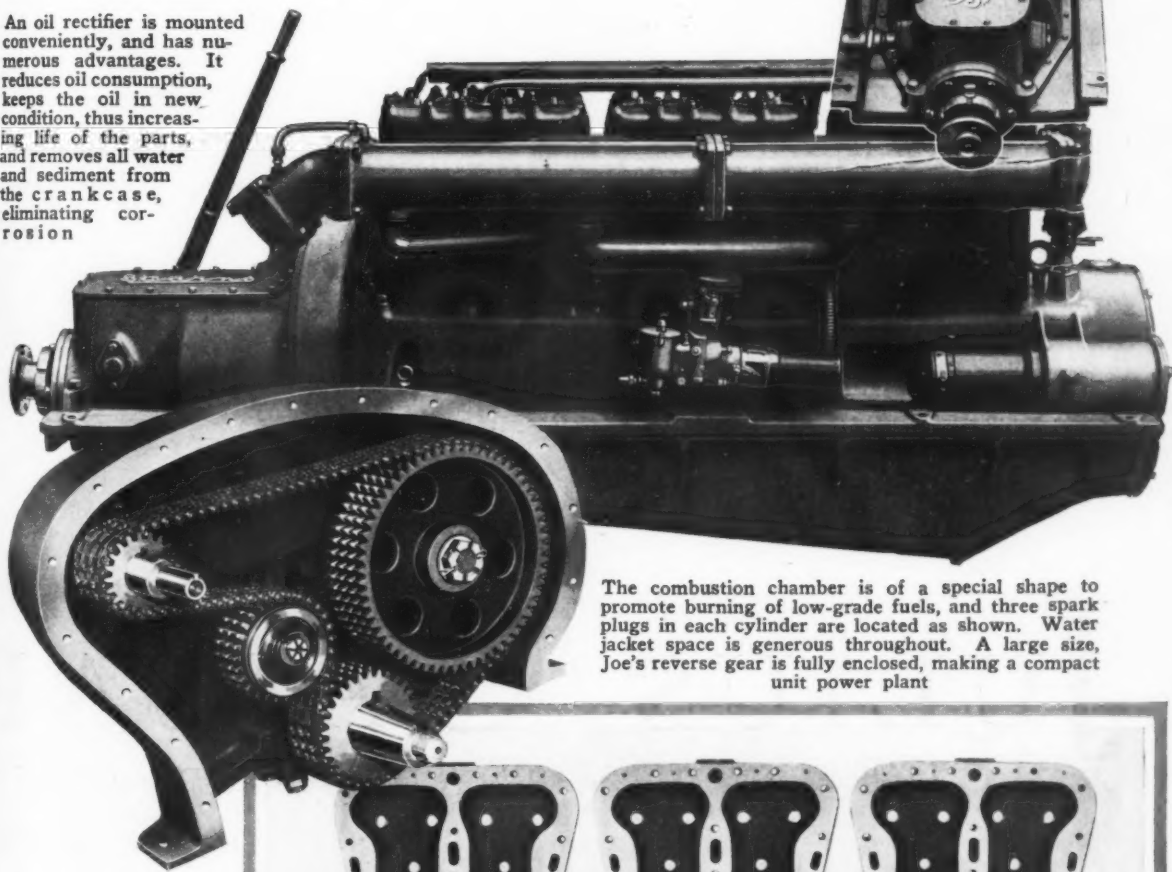
The camshaft and the crankshaft are heavy chrome nickel-steel forgings, specially heat-treated, and with a high elastic limit. The journals are polished, and the shaft is carried on four large main bearings

Power SIX

*Under Stearns Marine Engine Is a Sym-
gned Particularly for Heavy Duty Service
e Usual Difficulties in Installing Large
ependability for Uninterrupted Service Has
Major Consideration in Planning the Machine*

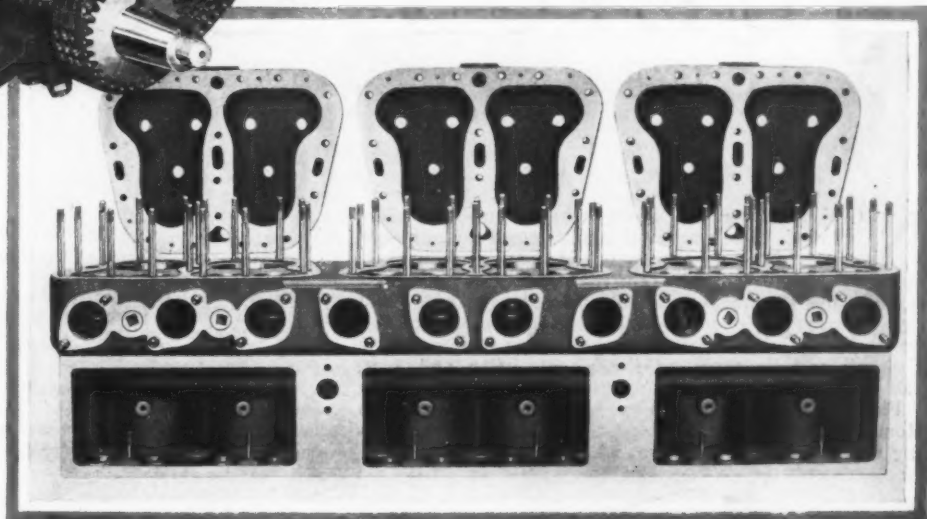
The crankcase and the upper part of the flywheel housing form an integral casting, as does the oil base pan, which makes up the lower half of the crank case. It is reinforced and strengthened at the points of greatest stress

An oil rectifier is mounted conveniently, and has numerous advantages. It reduces oil consumption, keeps the oil in new condition, thus increasing life of the parts, and removes all water and sediment from the crankcase, eliminating corrosion



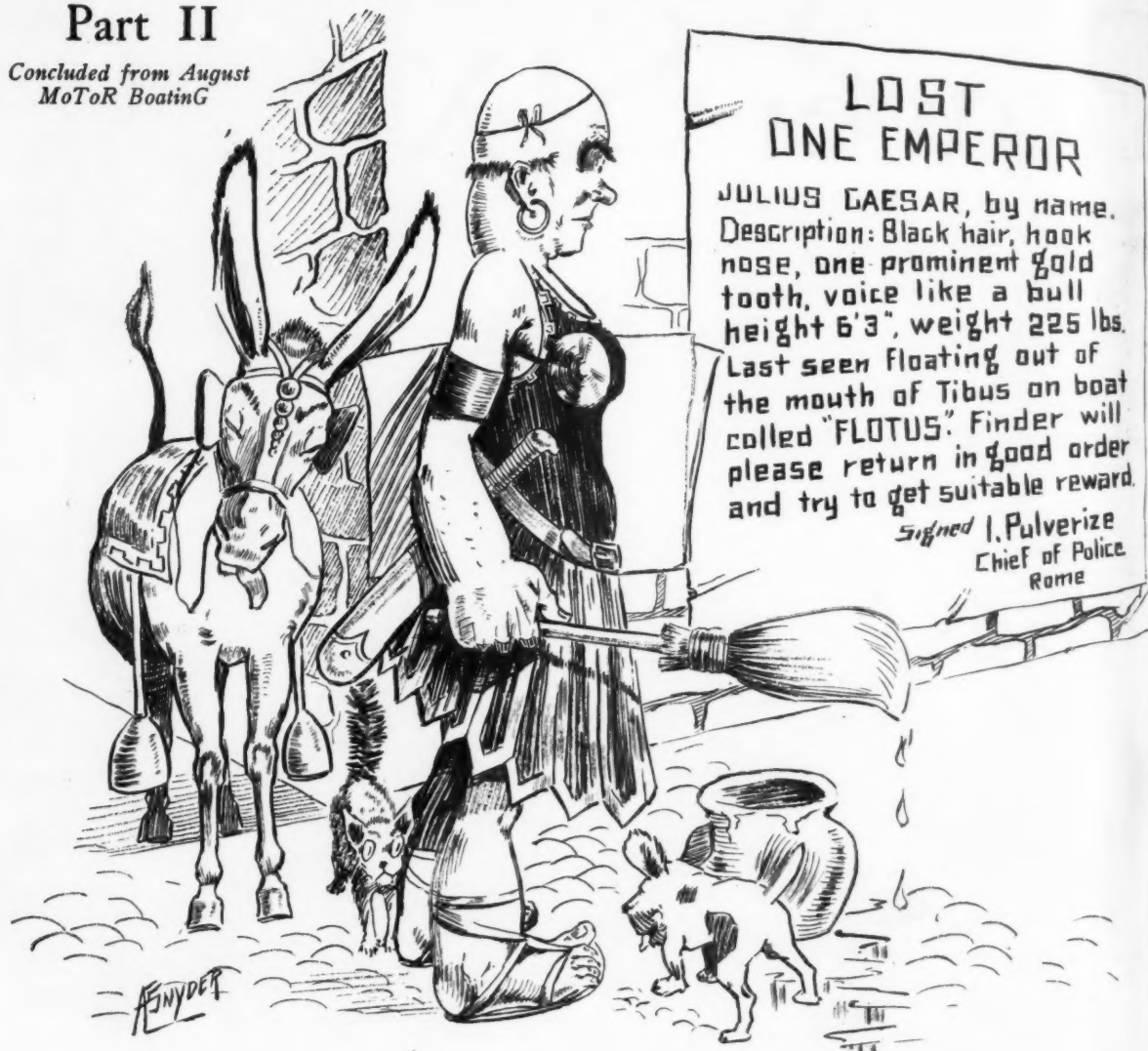
The combustion chamber is of a special shape to promote burning of low-grade fuels, and three spark plugs in each cylinder are located as shown. Water jacket space is generous throughout. A large size, Joe's reverse gear is fully enclosed, making a compact unit power plant

A specially designed Link-Belt silent chain drives the camshaft, water pump, and all accessories. An automatic tightener takes care of any slack. Ignition is by a 12-volt American Bosch system, with two spark magneto and battery for emergencies



Part II

Concluded from August
MoToR Boating



JULIUS CAESAR

Cleopatra Releases Him from the Dungeon and His

Illustrated by

NOW for some four months he languishes underground. The warden, he only comes around once to see how the customers is getting along, and upon this event Caesar, he tells him who he is, supplicating-like, but the warden, he gives him the raspberry and says, "Sure, they is lots of nuts like you around; in fact, we has three others like you in here what claims they is Caesar," and he turns to the deputy-jailer and says, "Doesn't you LOVE that!"

Finally a messenger, what has traveled all the way from Rome on a ass, he arrives at Cairo, and he starts sticking up posters all over town, what reads:

LOST ONE EMPEROR

JULIUS CAESAR by name. DESCRIPTION: Black hair, hook nose, one prominent gold tooth, voice like a bull, height 6 feet 3 inches, weight 225 lbs. Last seen floating out of mouth of Tibus on boat called Flotus. Finder will please return in good order and try to get suitable reward.

(Signed) I. PULVERIZE,
Chief of Police, Rome.

Now when the populace, they reads all this, they immediately recalls the event of the Flotus and they gnashes their teeth and they sets up a great cry, and Cleopatra, who was trying to get her afternoon nap, wakes up from

Finally a messenger, what has traveled all the way from Rome on a ass, he arrives at Cairo, and he starts sticking up posters all over town



Goes to Sea by HUCK

Further Adventures are Followed by a Sad End

A. E. Snyder

the noise, calls in Profundus, the attorney-general, and says to him, "What is all the shouting about?" He gives her the dope and she rings her hands and says, "Hot dog! does you suppose that gink what we has down in cell No. 77, he is really Caesar?" "I allows as how it might be," replies Profundus, "and I hereby serves you notice, your majesty, that my resignation it takes place at once if not sooner, and I immediately takes a long trip into the desert for my health, I does," and with this he beats it, leaving Cleopatra alone with her troubles.

Then, looking into her glass and murmuring to herself, "No man can resist me," she gives orders that Caesar be

brought to her in a coupla hours, dressed proper-like, and she rushes into her boudoir and says to Cocobutr, her maid, "Quick! do your stuff as you has never done it before. Unless that feller falls for my fatal beauty, my head it gets knocked off with a axe." Then they starts in giving her the skin you loves to touch, plucking the eyebrows, waving the hair and doing all them things, what was a lost art for a thousand years after Cleopatra's day, but which the women of our generation, they is learning to do all over again. By four o'clock she enters the Thrown Room with a coupla Birds of Paradise stuck in her hair, brass ash-trays

(Continued on page 72)

ELF, *A 31 Foot* Auxiliary Sloop

Complete Drawings and Instructions for Building a Type of Craft Which Will Appeal to Yachtsmen

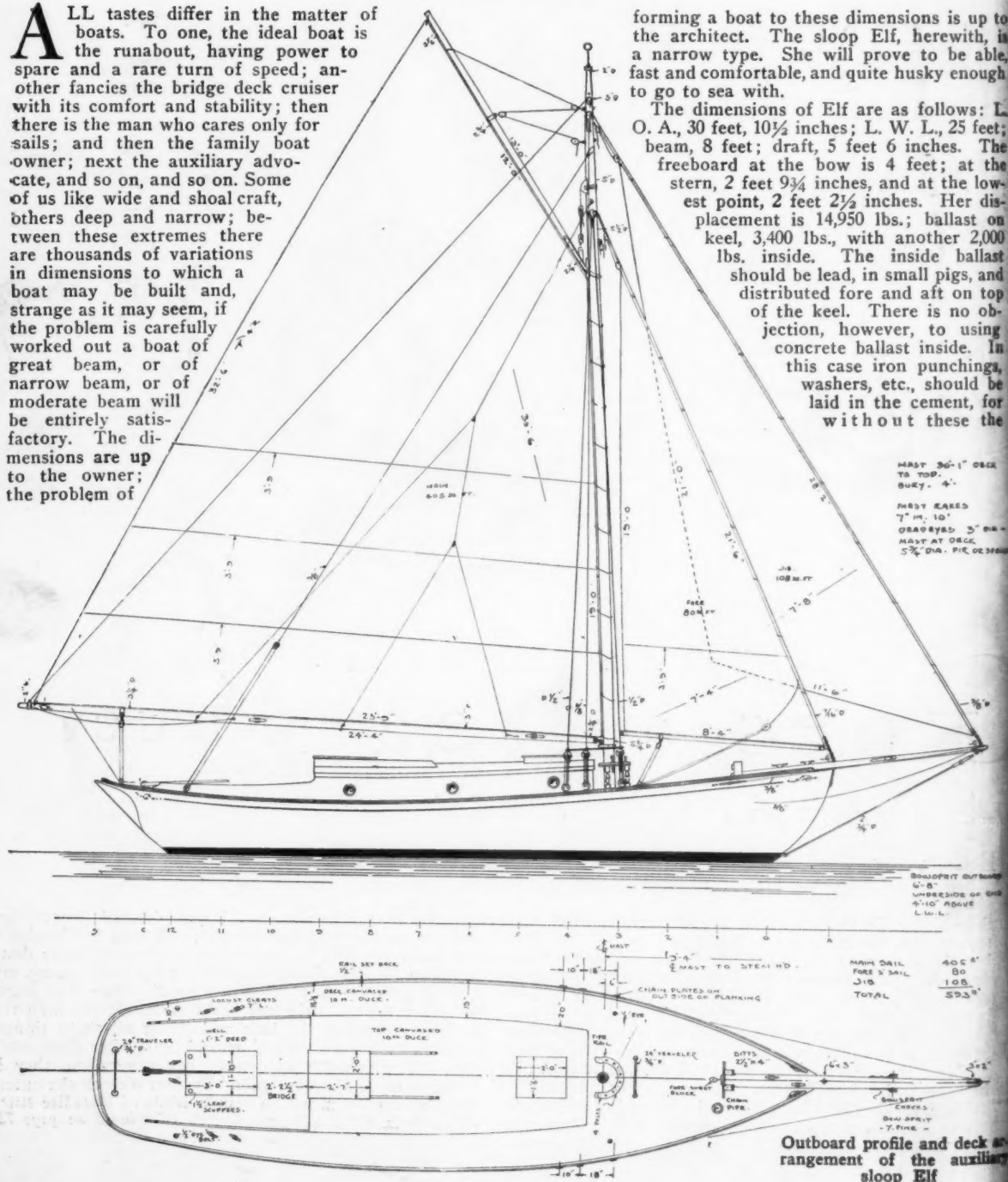
Designed Especially for MoToR BOATING

By William Atkin

ALL tastes differ in the matter of boats. To one, the ideal boat is the runabout, having power to spare and a rare turn of speed; another fancies the bridge deck cruiser with its comfort and stability; then there is the man who cares only for sails; and then the family boat owner; next the auxiliary advocate, and so on, and so on. Some of us like wide and shoal craft, others deep and narrow; between these extremes there are thousands of variations in dimensions to which a boat may be built and, strange as it may seem, if the problem is carefully worked out a boat of great beam, or of narrow beam, or of moderate beam will be entirely satisfactory. The dimensions are up to the owner; the problem of

forming a boat to these dimensions is up to the architect. The sloop Elf, herewith, is a narrow type. She will prove to be able, fast and comfortable, and quite husky enough to go to sea with.

The dimensions of Elf are as follows: L. O. A., 30 feet, 10½ inches; L. W. L., 25 feet; beam, 8 feet; draft, 5 feet 6 inches. The freeboard at the bow is 4 feet; at the stern, 2 feet 9¾ inches, and at the lowest point, 2 feet 2½ inches. Her displacement is 14,950 lbs.; ballast on keel, 3,400 lbs., with another 2,000 lbs. inside. The inside ballast should be lead, in small pigs, and distributed fore and aft on top of the keel. There is no objection, however, to using concrete ballast inside. In this case iron punching, washers, etc., should be laid in the cement, for without these the

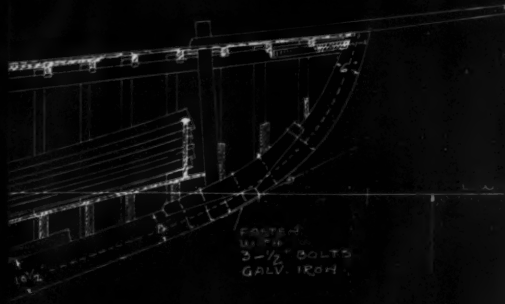


deck ar-
auxiliary

SEEK

MOTOR BOATING'S ELF A

Scale $\frac{1}{4}" = 1' - 0"$



STATIONS SPACED 25'
FRAMES SPACED 12 1/2"



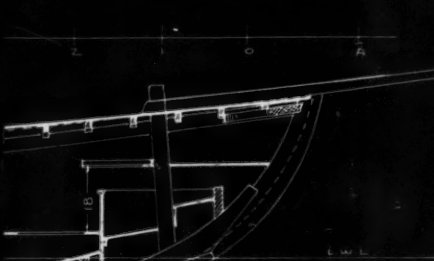
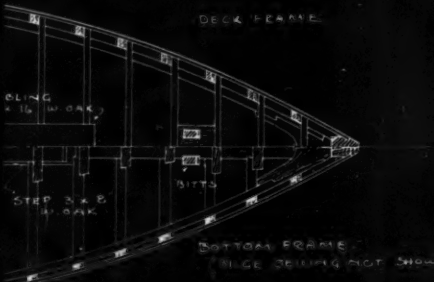
CABIN TOP 1/2" T AND 1/2" FIK
COVER WITH 10 1/2" QUICK
CROSS SIDES 1 1/2" EXPRESS
DECK 1/2" X 2" RIG OR RINE
MS 1/2" X 2" R2
DOUBLED 1 1/2" X 2" R2

UNFRAMES
TO BRUSH
2" HEEL
PLGE.
DECK

PLANKING 1/2" CEDAR
18 STRAKES EACH SIDE
FASTENINGS GALV. COAT
NAILS

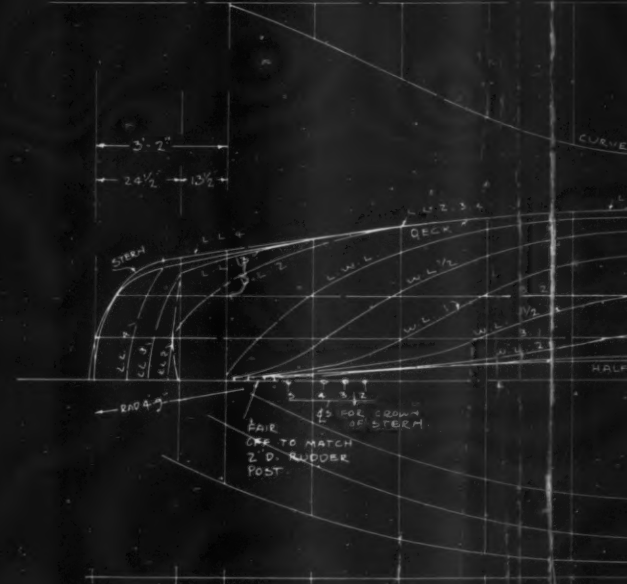
KEEL AND DECK
DOED 10 1/2" W. RIG OR RINE
KEEL BOLTS 3/4" GALV. IRON
IN STEEL W. RIG OR RINE
SOS PLUGGED WITH COMBENT

SECTION AT
A - 7 - 1/2"



DIMENSIONS	
L.O.A.	30' 10 1/2"
L.W.L.	25' 0"
BREADTH	8' 0"
W.L.	7' 8"
DRAFT	5' 6"
FREEBOARD	
BOW	4' 0"
LEAST	2' 2 1/2"
STERN	2' 2 1/2"
DISPLACEMENT	14,950 #
BALLAST ON KEEL	3,400 #
BALLAST INSIDE	2,000 #
SAIL AREA	553 S.F.

LINES TO OUTSIDE PLANKING
STEM SIDED 6"
KEEL 10"

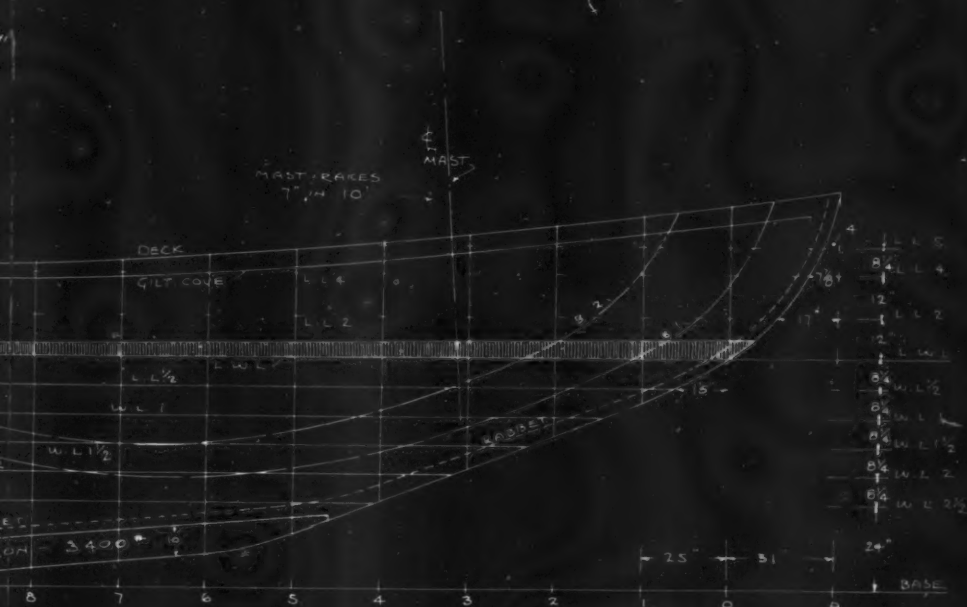


Design
William
Espe

MOTOR
BOATING'S
119 W
N

G's BUILD A BOAT Series

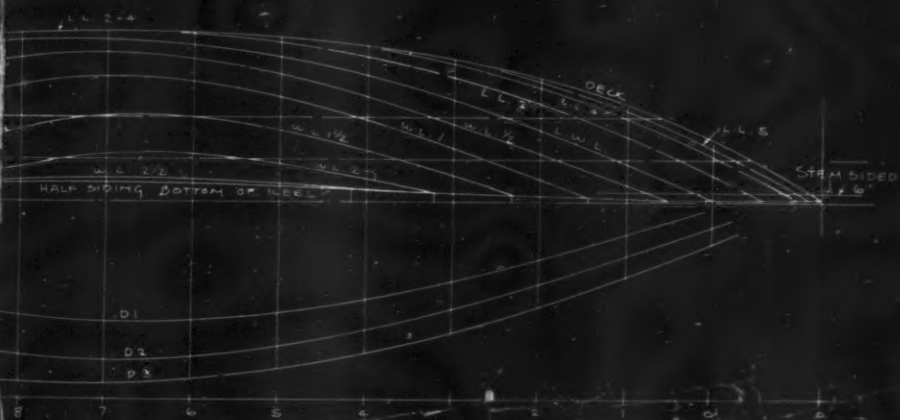
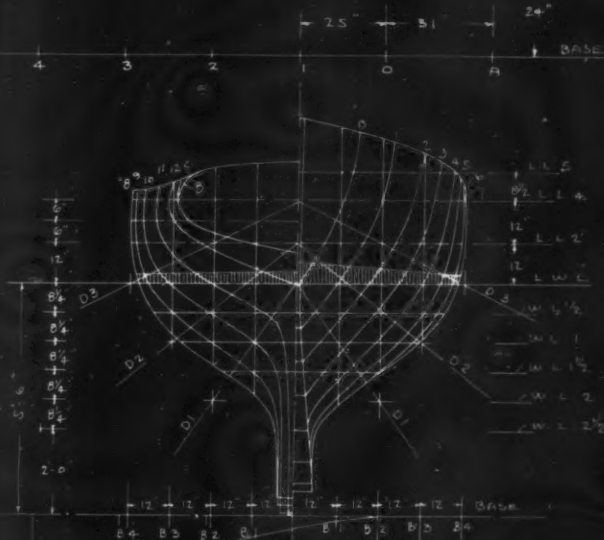
An Auxiliary Sloop



Designed by
William Atkin
Especially for

MOOR BOATING

119 West 40th St.,
New York





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weight will be insufficient. Concrete for this purpose should be made with three parts sharp sand to one part of cement, and thoroughly mixed before it is poured into the bilge. It is best to lay the concrete on the bare wood, and it must be thin enough to run or to be troweled into every crevice, for otherwise water will find its way into the open spaces, where it will freeze and break up the concrete. Concrete preserves the wood, makes a clean bilge, strengthens the boat, and in various other ways is advantageous.

The lines must be laid down on the floor to full size if one expects to have the finished boat look like the original drawings. The same number of stations should be drawn as are drawn on the plans. There are no short cuts for this part of the work, no way to slap the thing together without laying down the lines. I have seen builders try the thing over and over again and you can rest assured that whenever you see a boat with an ugly sheer, flat places on the sides, or an ugly stern, you can be sure that some one has tried to build from plans without going to the trouble of laying down to full size. Guessing, and building by eye, is the longest way to go about building a boat. Build exactly like the plans, or do not build from plans at all.

The keel will be made of white oak or yellow pine, sided 10 inches and moulded 10 inches, and the deadwood, stern post, horn timber, stem, etc., of the same material and sided and moulded as shown on the construction plans. These parts should be fastened together with $\frac{3}{8}$ -inch galvanized iron drift bolts. The iron keel will be fastened with $\frac{3}{8}$ -inch galvanized iron bolts, seven of these, and so spaced as to extend through alternate floor timbers, as shown. The heads of the bolts must be let into the iron and later must be plugged with cement or wood. It is an excellent plan to lay a strip of $\frac{1}{8}$ -inch thick felt between the iron and the bottom of the keel. This should be laid in red lead paint. The iron keel must be cast before the wooden keel is finished, for invariably the iron shrinks or swells, or does something it is not expected to, and it is easier to fit the wood to the iron than the iron to the wood. There is nothing worse to look at than an iron keel whose sides project beyond the wood, and the unevenness does not help the sailing qualities of the boat. I might mention that drift bolts should never be driven in parallel with each other; they should

be canted or toed, which gives greater holding power.

The frames will be sawn and doubled and set on $12\frac{1}{2}$ -inch centers. These will finish 3 by $2\frac{1}{2}$ inches at the heels, 3 by 2 inches at the bilge, and 3 by $1\frac{1}{2}$ inches at the deck. Frames will be made of white oak and bolted together with $\frac{1}{2}$ -inch galvanized iron bolts. It may be that some builder will be better equipped to use a steam-bent frame in Elf. In this case the frames should be moulded 2 inches and sided $1\frac{3}{4}$ inches, set on same centers as the sawn frames. The heels of all frames must be boxed into the keel, stem and deadwood, then well spiked with 4-inch boat nails.

The floor timbers will be made of $1\frac{3}{4}$ -inch white oak and will be set on the forward face of every frame. These will be bolted to the frames and fastened to the keel with $\frac{5}{8}$ -inch galvanized iron drift bolts. The floor timbers in the neighborhood of the motor will be rather deeper than the rest, so as to take the fore and aft members of the motor bed. The motor beds will be made of 5 by 5-inch white oak and of suitable length to fit the base of the motor to be installed.

The clamps will be made of two lengths of $1\frac{1}{2}$ by 4-inch yellow pine, these to be doubled up as shown. The clamps will be through-bolted to the heads of the frames with one $\frac{3}{4}$ -inch galvanized iron bolt to each frame. At the ends the clamps will be secured with suitable knees, as shown, and well bolted.

The bilge ceiling will consist of five strakes of $\frac{3}{4}$ by 3-inch yellow pine and fastened to the frames with galvanized iron boat nails. This ceiling will extend from station 1 to station 12. It must be in single lengths.

The deck beams will be made of $1\frac{1}{2}$ by 2-inch yellow pine or white oak and set across the heads of all frames, as shown. The ends will be fastened into the clamps with 4-inch galvanized iron boat nails, and into the frame heads as well. There will be a heavier beam at the aft end of the cabin house and another abaft the mast.

The stern will be planked double over two $1\frac{1}{2}$ by 3-inch white oak crowns. Planking, $\frac{3}{4}$ by 3-inch white cedar, inside laid vertical, outside athwartships, fastenings galvanized iron boat nails, having heads countersunk and plugged. Notice that there are quarter knees under the clamps and fashion pieces in the quarters for the deck line aft is rounding. The knees will be hackmatack or white oak; the latter

(Continued on page 82)

SLOOP-Elf
DESIGNED BY NO. 130-182-4

STATION	A	0	1	2	3	4	5	6	7	8	9	10	11	12	C	S
H E I G H T S																
L.W.L. TO DECK	4-0	3-7½	3-4½	3-1¾	2-10½	2-8½	2-6½	2-4½	2-3½	2-2½	2-2½	2-2½	2-3½	2-5½	2-6½	2-9½
" " GILT COVE	3-5	3-1¼	2-10½	2-7½	2-5	2-3	2-1	1-11¼	1-10	1-9½	1-9½	1-9½	1-11	2-1½	2-3½	
BASE - B 2			7-7	5-10½	4-11½	4-3½	3-5	3-5½	3-5	3-7½	4-1	4-8½	5-5½	6-3½	6-8½	
" " B 1			7-3½	5-7½	4-7¾	3-10½	3-3½	2-10½	2-8	2-7½	2-10½	3-4½	4-1	4-11	5-11	6-5½
" " RABBIT			5-10	4-9	4-0	3-1¾	2-5½	2-0	STRAIGHT LINE	1-5	1-4	1-4	3-0	5-7½	6-4½	
" " BOTTOM KEEL			5-6	4-5½	3-7½	2-10½	2-1	1-3½	0-5½	STRAIGHT LINE TO		0-0½	0-0½			
H A L F B R E A D T H S -																
DECK	0-0½	1-5¾	2-4	2-11¾	3-5¾	3-9	3-11½	4-0	4-0½	3-11½	3-10½	3-7¾	3-4¾	3-0	2-9½	2-3½
L.L. 5		1-3½	2-2¼	2-10¾	3-4¾	3-9										
L.L. 4		1-1¼	2-0	2-9	3-3½	3-8	3-10¾	4-0½	4-0½	4-0½	3-10½	3-8½	3-5	3-1½	2-11	
L.L. 2												3-8½	3-5	2-11	2-6½	
L.L. 2		0-8	1-7	2-4	2-11¾	3-5½	3-9¾	3-11½	4-0½	4-0	3-10¾	3-7¾	3-2½	2-5½	1-3	
L.W.L.	0-0½	0-11	1-8½	2-5¼	3-0¼	3-5¾	3-8½	3-10	3-9¾	3-7	3-0¾	2-0¾	0-1½			
W.L. ½		0-4½	1-1½	1-10¼	2-6¼	3-0½	3-4¾	3-6¼	3-5	2-11¼	2-1	0-9				
W.L. 1			0-6½	1-3¼	1-11	2-5½	2-10	2-11½	2-9	2-0½	0-11½	0-3				
W.L. 1½				0-7¾	1-2½	1-8	1-11¾	2-0½	1-8½	1-0½	0-5	0-2¾				
W.L. 2					0-6	0-10¾	1-1¼	1-1½	0-9¾	0-6	0-3½	0-1¾				
W.L. 2½						0-5¼	0-6¼	0-6½	0-5¾	0-5	0-3	0-1¾				
SIDE KEEL	0-0½	0-0½	0-1½	0-2	0-2½	0-3½	0-4½	0-5	0-5	0-5	0-4½	0-3½	0-1½			
D I A G O N A L S																
D 1			0-9¾	1-4¾	1-11	2-4	2-8	2-10	2-10½	2-8½	2-4	1-9	1-0			
D 2		0-7	1-4¼	2-0	2-6½	3-0½	3-5½	3-8½	3-9½	3-8½	3-3½	2-8½	1-11½	1-0½		
D 3		1-0½	1-10½	2-6½	3-1½	3-7½	3-11½	4-2½	4-4	4-3½	4-1¼	3-9	3-2½	2-5½	1-11¼	

DIMENSIONS TO OUTSIDE
OF PLANKING - FT. 8 IN. -

WILLIAM ATKIN
NAVAL ARCHITECT
HUNTINGTON, N.Y.
(4-4-1)

Table of offsets which gives all necessary figures for laying down and building the auxiliary sloop Elf

SMALL MOTOR BOATS

Their Care, Construction and Equipment

A Monthly Prize Contest Conducted by Motor Boatmen

Questions Submitted for the November Prize Contest

1. What precautions should be taken to protect the hull to the best advantage when covering the boat up for the winter?
(Submitted by T. B. K., Bronx, N. Y.)

2. Explain and illustrate a simple, practical means of breaking out and raising the mcoring anchor.
(Submitted by W. B. M., Newburgh, N. Y.)

Adjusting the Ignition Equipment

How to Keep the Electrical End of the Engine In Proper Tune With Simple Hints for Maintaining Its Efficiency

Answers to the Following Question Published in the July Issue

"Explain the care and adjustment of ignition timing apparatus, breaker points, distributor, etc."

Care of Ignition Timing Apparatus

(The Prize-Winning Answer)

INSTRUCTIONS for adjusting ignition apparatus can only be general in character. The engine operator should be sure to obtain specific instructions from both the engine manufacturers and the makers of the particular ignition system used. Each set will vary somewhat in regard to the breaker point opening and other particulars. Be particularly careful to follow the oiling instructions, especially those pertaining to a high tension magneto. If oil holes and covers are not accessible, remove the whole magneto or other apparatus for the periodic oiling so as to be sure that the correct number of drops are used (sometimes but one drop is needed, but in the right place) and applied through the proper holes. Some magnetos have an oil hole at each side, but oil is applied in only one, the outside; hence the need of special instructions.

About the most important operation is the adjustment of the breaker points whether high tension magneto or single spark battery system, though this should not have to be performed very often. Should heavy sparking occur at the points, it is usually a sign of a broken down condenser and the service station should be consulted. In time, though, the points will pit and wear and burn away; they will open too far and make the sparking inaccurate. If filed or ground down, this will increase the opening still further and the points must be set nearer together. Usually but one point is adjustable, but before attempting to set, examine the points and if pitted or worn unevenly, smooth down so the surface of each point will be flat and even. But it is essential that the points, when in contact, bear evenly across their entire flat surfaces, so great care is required in the smoothing operation. By the use of a special thin magneto

file, the points may be filed while in place, but do not rock the file or hold it at a slant while filing; move it always parallel with the breaker points. Some points, such as those used in the Liberty aeroplane engine, are of an alloy too hard to file and when worn must be discarded or ground. By removing the wheel of a hand-power bench grinder and substituting a true running wood or metal disc with a circle of carborundum paper or cloth glued to it (a wood disc can be turned in place) a small surface grinder can be extemporized on which the points can be ground by means of some kind of wooden jig standing in front of the abrasive disc and supporting the breaker point, which must of course be removed from the apparatus. Or a true surfaced oil stone can be used, the point being moved back and forth and supported by a wood or metal shim to prevent its rocking. After grinding, or filing with the points removed, always test them upon assembly and if the points do not meet fairly, remove one and correct the surface. For removing and adjusting, the manufacturers usually furnish a special small open end wrench with gauge attached, the proper amount of point opening being stamped on the wrench. Always use such a wrench and gauge; pliers will cause damage and the amount of opening cannot be judged by eye. Make the adjustment with the breaker cam in its full open position and be sure to tighten the locknut when the adjustment is complete and tested.

Though the actual timing is not discussed here, if necessary to determine the position at which the points open, spring back the cam rocker by hand and insert a cigarette paper between the points; then turn the engine over slowly and note the position at which the paper can just be withdrawn. This is considered to be the point of opening. Clean the breaker box thoroughly and do not apply an excess amount

Rules for the Prize Contest

READERS are urged to consider the above questions for the November issue, and send answers to them to the Editor, *MoToR BoatinG*, 119 West 40th Street, New York, N. Y. Answers should be (a) in our hands on or before September 25, (b) about 500 words long (c) written on one side of the paper only (d) accompanied by the sender's names and addresses.

The names will be withheld and initials used.

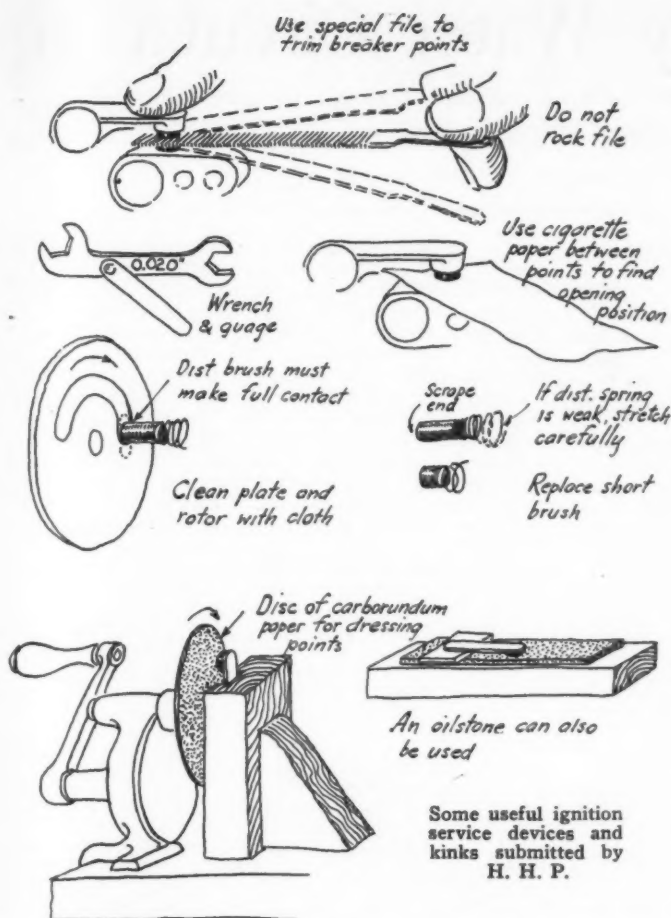
QUESTIONS for the next contest must reach us on or before September 10. The editor reserves the right to make such changes and corrections in the accepted answers as he may deem necessary.

The prizes are: For each of the best answers to the question above, any article or articles sold by an advertiser advertising in the current issue of *MoToR BoatinG* of which the advertised price does not exceed \$25, or a credit of \$25 on any article which sells for more than that amount. There are two prizes—one for each question—but a contestant need send in an answer to only one if he does not care to answer both.

For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of *MoToR BoatinG* of which the advertised price does not exceed \$5, or a credit of \$5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.



of oil; one drop on end of toothpick is enough; then examine the distributor.

If carbon brushes are used, see that they make good but not excessive contact with rotor; if worn down short, replace. Should spring be weak, remove brush and carefully stretch the spring without distorting. Replace with a circular motion so as to screw the spring down into place. If brush ends are glazed, scrape lightly. See that each brush (if one does, all should) makes full contact with rotor segment at the moment of opening of the breaker points; the brush should not overrun the segment nor be only partly on. If this condition exists, consult the service station. And here a hint might be given to first make sure that they know their business at the service station, even if it is one authorized by the ignition manufacturers. In one case at least the station authorized by a well-known magneto company was known to have returned a magneto with the breaker mechanism ninety degrees out of time with the distributor, and furthermore they were seen to assemble the magneto, after replacing a rotor bearing, with hammer and cold chisel. Adjustments made, clean distributor and rotor with dry cloth, or use a small amount of gasoline if required, wipe dry and apply a very

thin coat of vaseline to the rotor contact plates.
H. H. P., Los Gatos, Calif.

IN the care and adjustment of timing apparatus, it is well to bear in mind that the timing, or selection of the point of the stroke at which ignition shall take place, is a most important factor in the application of any method of ignition.

Figure 1 will serve to illustrate the point of ignition. It will be noted that compression is continued to the end of the stroke, before the compression curve makes an abrupt change into a nearly vertical line; the point of ignition, that is, the piston position at the instant of the spark, the nearly vertical explosion line with the high peak coming almost to a point, denotes a strong mixture and a quick explosion.

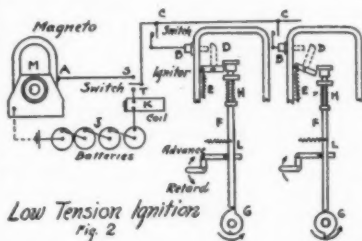
From this it will be seen that there is an appreciable time interval between the spark and the maximum pressure of combustion. This explains why the spark should occur earlier for an engine running at high speed than for one running at a low speed. In general the spark should be advanced as far as possible consistent with smooth running in order that the temperature when the exhaust begins will not be high enough to burn or injure the exhaust valves.

Although there are several ways in which the gas charge in the cylinder may be ignited, namely, by a naked flame, by a highly heated metallic surface, by the heat of very high compression and by an electric spark, the first three methods will not be taken into consideration for the reason that the naked flame method is obsolete, heated metallic surface being used to a very limited extent and the electric spark now being the prevailing method. The electric spark method is divided into two classes known as Low Tension or make and break, and High Tension or jump spark systems, and in order to

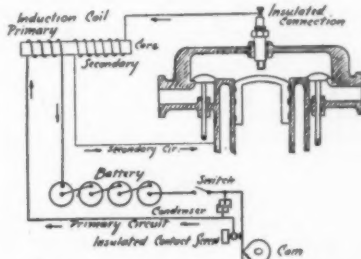
be able to care for ignition systems a general knowledge of the principles involved will be necessary.

In the low tension system there is a device known as an igniter, which is placed in the combustion space of the engine cylinder. This consists of two electrodes, one of which is stationary, the other being movable. The stationary electrode is insulated, while the other, being placed on an arm within the cylinder, is capable of being moved from the outside

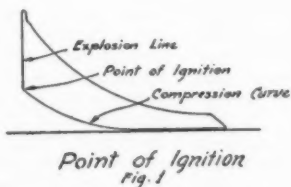
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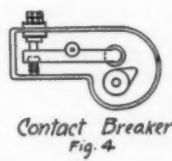
Low Tension Ignition
Fig. 2



High Tension Ignition
Fig. 3



Point of Ignition
Fig. 1



Contact Breaker
Fig. 4

Diagrams which explain the why and wherefore of the electric ignition systems by F. W. L.

Curing Faulty Water Circulation

An Annoying Fault With Many Engines Which Can Be Readily Corrected by Observing Simple Instructions

Answers to the Following Question Published in the July Issue

"Describe and illustrate how faulty water circulation through the motor's waterjackets can be remedied, thus relieving overheating troubles."

Curing Overheating Troubles

(The Prize-Winning Answer)

WATER circulating systems on marine motors are for the initial purpose of carrying away the surplus heat from the explosions in the cylinders, thus keeping these castings at the correct operating temperature. If there were not some medium by which this cooling could take place, these castings would soon become red hot and the pistons would stick in the cylinder bores. Faulty circulation or the complete failure of the water supply seriously interferes with the efficient operation, or may ruin a perfectly good power plant; therefore, if you have been having any difficulties of this nature, read the following carefully and it may help you solve your problem.

It is a well known fact that much of the automobile motor efficiency is directly due to the higher operating temperatures under which it must function; while on the other hand, many marine motors run with their jackets far too cool. Although the cooling water should never reach the boiling stage, its temperature should be about 180 degrees when it leaves the jackets. In the majority of motors today, this must be adjusted by the aid of manually operated valves placed in the line of piping, so that only sufficient water is circulated through the jackets. The sketch shown will give you a good idea as to how to place the valves and piping correctly in order to get good results. Many people will say that the manufacturer of their motor knew how much water the motor needed, and installed a pump whose capacity would take care of all needs. But, did you ever stop to think that this same manufacturer has quite a bit of export business, shipping his products to all parts of the world, which would necessitate this cooling system to be elastic in order to successfully operate in various climates? Well, such is the case, and those of us in the temperate zone will find that the pump on our motor is designed to also take care of the cooling problem when this same power plant is operated in the torrid zone; consequently, we of the temperate zone are certain to find that our motors are getting a little bit too much of this cooling medium for maximum efficiency. Remember this, if you can lay your hand on the jackets of your motor and keep it there without discomfort, ten to one your motor is running far too cool.

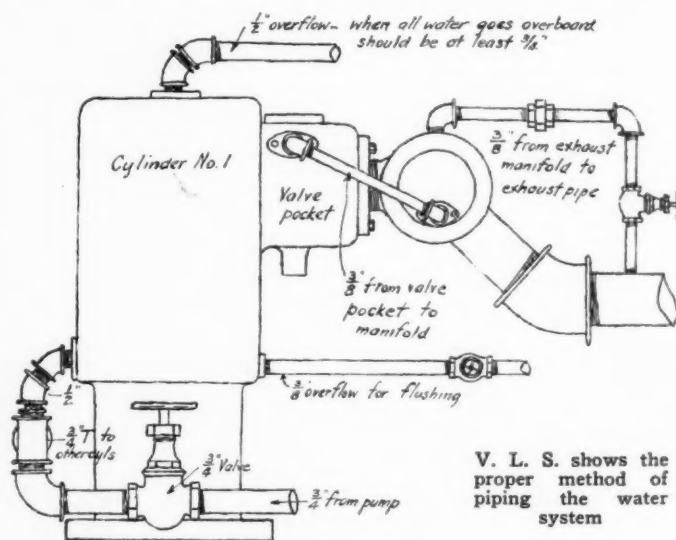
On the other hand, many of us are having trouble in not getting enough water, or in not getting the water in the correct places, so let us look at this phase of the question. One of the chief causes of motors running too hot is the clogging of jackets, by-passes or piping, due to collections of salt, mud and rust deposits. This

can be entirely eliminated in the future if you will thoroughly clean out these deposits and follow out the instructions in this article for the piping and water circulation. Another frequent fault found in some of the older motors is where hot spots develop at places in the jackets. Continuous operation under these conditions will invariably result in loss of power or damage to the cylinders and pistons; therefore, it will pay anyone having trouble of this sort to find the cause and eliminate it at once. Improper circulation, clogging of jackets, obstructed passages or piping, thick spots in the cylinder castings, and steam pockets caused by hot water being trapped are the chief causes of this trouble. Outside of defective castings, these faults can be readily traced and eliminated by a little intelligent effort on your part.

Knowing that hot water always rises, it is very obvious that in piping the circulating system this prime factor should be constantly in mind; therefore, let us divide the water circulating system into several parts and take up each in turn, so that you will know when and where to look for the cause.

First: the pump should be of the correct type and size, preferably constructed entirely of bronze, installed as low as possible on the motor, should be in good mechanical condition, and the check valves where needed should be installed correctly. Pumps are made in four varieties, namely: plunger, centrifugal, gear and rotary vane. The centrifugal type is not suitable for marine work, as it will not lift water, therefore, it will be discarded. For speeds up to 400

strokes per minute, the plunger pump is the most reliable and has a longer life than any other type. When operated above this speed, they wear very quickly; consequently, gear and rotary vane types are used on the medium duty and high-speed motors. The faults of the plunger pump are, expensive replacement or repairs, noisy operation, frequent adjustment of the stuffing gland, friction losses which require more power from the engine to operate, the necessity of using check valves with their consequent troubles and noise, and the possibility of blowing gaskets or cracking the water jackets when outlet passages are accidentally clogged. They are, however, very reliable under ordinary operating conditions, and are not so liable to be seriously damaged by sand or mud being sucked into the barrel. The gear pump is the predominating type today, chiefly because of the low first cost and ease of operating at most any speeds desired. If piped correctly, they do not need check valves, and can be direct-connected to the camshaft or ignition shaft, thus eliminating noisy moving parts. Their faults are, liability of serious damage or failure by sand or mud being sucked in around the gears, gears becoming noisy due to wear, short life in sediment-



V. L. S. shows the proper method of piping the water system

laden water, and the extra friction set up by the use of two internal gears, one driven and one idler. The rotary vane pump is not used to the extent that it should be, as it has many admirable qualities and few faults. It has only one part that is liable to wear excessively or break, namely, the vane, and this is easy and cheap to renew. It can be easily mounted, direct-driven, requires

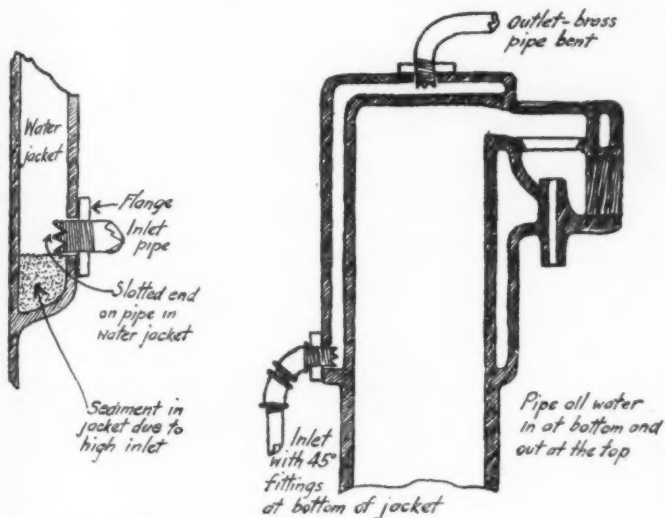
water. Where possible, it is better to bend the pipe in a long curve or use two forty-five fittings instead of a ninety-degree fitting or elbow. Where any of these inlet pipes fit into the jacket casting, they should have a long thread on them with the end which goes in through the casting slotted in the form of a V, as shown in the sketch, so that sediment will not clog around them. This

also applies to the outlet piping where it is connected to the cylinder head, and it will be found to prevent scale or other foreign matter covering this outlet so that the water cannot get out. Correct location of the inlet piping is very essential to proper circulation and the prevention of the water jackets becoming filled with deposits at the bottom. Pipe to the lowest part of the cylinder jackets and opposite to the exhaust valve pockets. It is also a good stunt to run a line of piping only half the diameter of the intake, out from the bottoms of the jacket opposite from the intake, leading overboard. A valve is placed in this line, and by opening it while the engine is in operation, it is possible to completely flush out any deposits in the bottom of the jackets. The outlet piping should be one size larger in diameter than the outlet port on the pump, and should lead out from the highest portion of each cylinder or block after the engine is installed in the boat. This is done so that there will not be any spots where the hot water can trap and turn to steam. Where there is more than one of these outlet pipes, they should be led into one pipe with a capacity equal to that of all the outlet pipes.

Where water is piped into a manifold, muffler or exhaust line, it is taken from a smaller pipe about $\frac{3}{4}$ inch in diameter, which is connected with the large overflow pipe leading overboard. This small pipe can have a valve in the line so that the amount of water can be regulated. In some cases where all the water is piped into a manifold, muffler or exhaust line, the large overflow pipe is connected direct without a valve; otherwise, the overflow pipe is run through the hull so it will drain overboard. However, the thing to remember is that the inlet water must be piped in at the bottom and out at the top of the jacket. Valves are placed in the line between the pump and the hull intake, and next to the pump or outlet check valve on the pump. This latter valve can be set so that the pump will feed the correct amount of water to the jackets, as it is between the pump and the jackets.

Third: the jackets should be of ample size to carry sufficient water for efficient cooling. They should be free of sediment deposits, obstructions and pockets where steam can be trapped or sediment collect. The ports between the cylinders and removable heads should also be of such size that they are capable of allowing twice the amount of water to pass as would ordinarily be admitted through the intake pipe, and care should be exercised so that none of these ports are covered with the head gasket. On this type of motor another essential thing to watch for is that when the engine is installed on a rake, one of these ports in between the cylinder and head jackets is placed so that it can carry the water out of the highest portion of the cylinder jacket, otherwise the

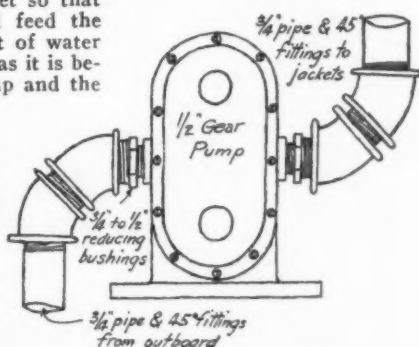
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V. L. S. shows how to connect pipes into jacket spaces

no check valves, only has one packing gland, has a much larger capacity per revolution than the gear type, is more reliable as well as less liable of failure due to breakages, is absolutely noiseless, and requires a minimum of horsepower for the maximum amount of water pumped. I have seen some wonderful records made by this type of pump when installed correctly, and the few faults were mainly traceable to the operator rather than to the pump. Whatever the type of pump on your motor, make sure it is in good condition and of ample size to give the motor the required amount of water. If not in good condition, have it repaired, or buy the parts and do it yourself.

Second: the piping must be of brass or galvanized iron, correctly piped and of ample size. Let us start in at the bottom of the hull and cover the entire pipe line clear to the overflow. The strainer fastened to the hull over the intake should be preferably oversize, with holes no less than $\frac{1}{8}$ inch in diameter or slots no less than $\frac{1}{4}$ inch in width, and it should clear the end of the intake pipe by at least $\frac{3}{4}$ inch. The intake pipe leading to the pump should be one size larger than the intake port on the pump, reducing it at the pump. Where the plunger pump is used, the reducing fitting is in between the intake check valve and the pump, in order that an oversize check can be used in this part of the line. The intake check valve is installed so that the pump can suck in water, but not pump it back overboard through the intake pipe. The outlet check valve, which is installed next to the other or outlet port of the pump, is installed so that the pump can force water through it to the jackets, but not so as the water can be drawn back into the pump on the suction stroke; otherwise, the pump would have a tendency to fill itself with the same water it has just pumped into the jackets. Where only one pipe is used in between the pump and the jackets, it can be of the same diameter as that of the outlet pump port. Where this pipe runs to the branch fitting leading into two or more pipes running to the different cylinders or cylinder blocks, it must be one size larger in diameter than the outlet pump port. The different pipes leading from this branch fitting are each of the same diameter as the pump port; this in order that each cylinder or block will receive approximately the same amount of



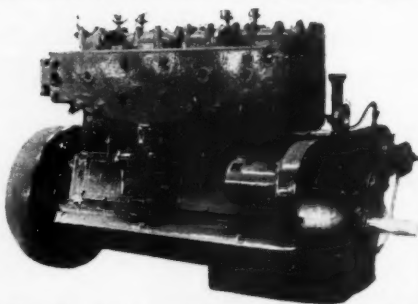
Large size pipe and 45 degree L's reduce friction

Yard and Shop

Notes of Interest to Both Owner and Manufacturer

Sterling Engines in Connecticut

IN expanding the distribution of Sterling marine engines, Messrs. Young & Hall, Inc., New York, have been appointed distributors for these engines throughout the state of Connecticut. Wilbur Young and Louis Hall, who comprise this firm, have both been in the boating game, in one form or another, for many years, and their association with the old-established line of Sterling engines is a natural consequence of their progressiveness.



The Big Chief engines, made by the Red Wing Motor Company, are also supplied for industrial purposes, such as generators, pumps, etc., and their rugged construction adapts them well to this service

limits of 27 and 45 feet l.w.l. The race will be under the 1925 rules of the American Power Boat Association, and full particulars are available through C. B. Probst, Chairman of the Regatta Committee of the Sheepshead Bay Yacht Club, Brooklyn, N. Y.

Radio Transmitter

For the experimenter in radio, particularly among the boatmen and yachtsmen of the country, there is now available at a very moderate price a small radio spark transmitter, which was made originally for the use of the



The 26-foot standardized mahogany runabout being built by Chris Smith at his big plant at Algonac, Mich.



Languid, the fast little boat, equipped with a Lockwood-Ash twin engine, which won races at Whitehall and Put-in Bay, Ohio

A Race on the Ocean

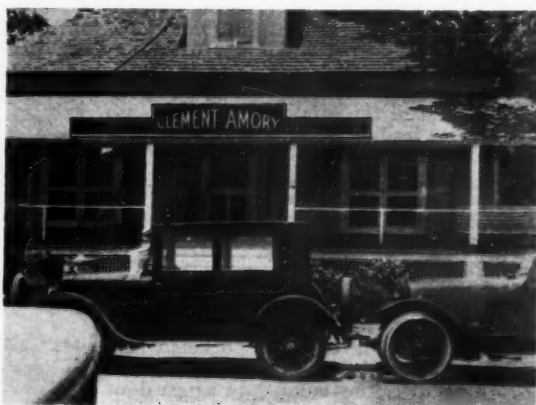
The Sheepshead Bay Yacht Club is arranging to hold an open handicap race for cruisers on September 13 on a course of 47 nautical miles, which starts off Manhattan Beach bell buoy, and runs to the buoy off Jones' Inlet, and thence to Scotland Lightship and return. Several attractive prizes have been offered for the first two boats to finish, and a permanent trophy, presented by Capt. Charles Trunz, owner of Tescil, which will become the property of the yacht club which wins it three times in the Sheepshead Bay Ocean Handicap. An innovation will be an additional trophy, presented by the Brooklyn Power Squadron, which will

be for competition among Power Squadron members. The conditions of the race permit cruisers and fast cruisers to compete between the

Army aeroplanes during the war period. These sets are now being sold by the American Sales Company of New York, and are made of the finest materials. The essential parts are a spiral tuning inductance, an induction coil, a sending condenser, and a spark gap. The wave length range is from one to 300 meters, and the coil is provided with hard rubber makers, to give the position for any desired wave length. The range of the set with a good battery is about 25 miles, depending upon the conditions, although some sets have worked for 100 miles, with the transmitter.

They would make an ideal installation for experimental work on small cruisers or even entire club fleets.

(Continued on page 65)



Clement Amory finds it hard to get away from boats and boating, and has added a Boat Sales Department to his Real Estate Office at Miami Beach

A. P. B. A. Annual Meeting

Word has been received from Secretary W. D. Edenburn of the American Power Boat Association, that the date for the annual meeting has been selected, and that the meeting will be held on Thursday, October 29, at 2 o'clock, at the Hotel Commodore, New York, N. Y. Commodore Frederick R. Still, the President of the Association, wishes to call this to the particular attention of all club delegates, so that they may prepare reports, and make arrangements to attend this meeting. Earlier in the day, a meeting of the Council of the Association will be held in the office of Treasurer Ira Hand, at 29 West 39th Street, New York, N. Y.



All "Chris-Craft" are Valsparred—of course!

CHRIS SMITH knows how to build good boats! If you want proof of this statement consider his famous Chris-Craft, for a moment.

Last year at Detroit, 21 of these Standardized runabouts raced one another, the winner averaging 29.4 M.P.H. and the tail-end 27.4 M.P.H! That performance established these runabouts as a marked success.

Then there's Miss America II with her remarkable record of 80.567 M.P.H., and Miss Detroit winner of the Gold Cup, Miss Toronto, Baby Speed Demon and a host of other famous "Champions"—all built by the Chris Smith and Sons Boat Company.

Such success in building boats can only be the result of careful workmanship and design. No details can be slighted or overlooked. No pains can be spared in their construction.

The finish? Valspar of course! Every one of the famous Smith Champions is Valsparred throughout. For Chris Smith knows that Valspar is absolutely waterproof, that it is the one varnish that gives 100% satisfaction all the year round!

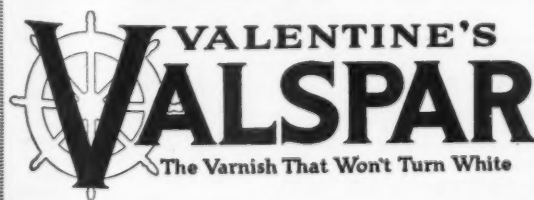
Top—The Chris-Craft race at Detroit, 1924.
Above—Miss America II. Photos by M. Rosenfeld, N. Y.

Right—Miss Chicago III.
Below—Miss Detroit V.



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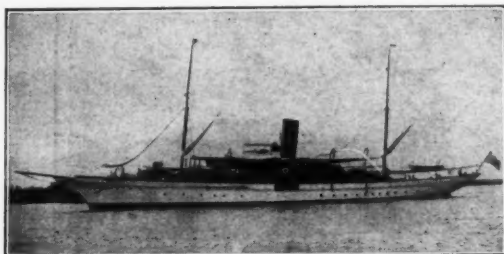
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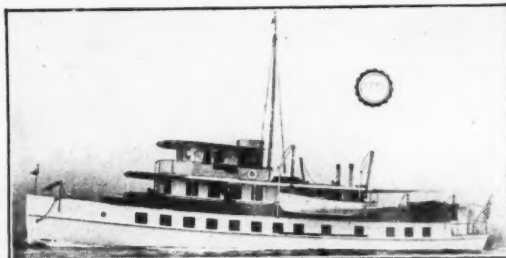
On this page are shown a few representative yachts selected from our large lists. Should none appeal kindly acquaint us with your requirements. Full information regarding costs to build, purchase or charter yachts of all types gladly furnished.



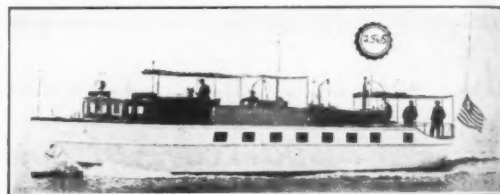
No. 341—FOR SALE or Charter—Large, seagoing steam yacht. Palatial accommodation. Unusual opportunity. Several similar larger and smaller available craft. Cox & Stevens, 25 Broadway, New York.



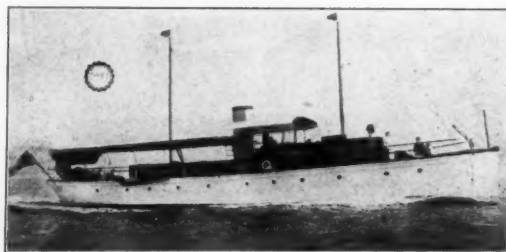
No. 885—FOR SALE OR CHARTER—Fast, steel, twin screw, cruising power yacht, approximately 120 ft. in length. Speed up to 16-17 miles; Winton Motors. Unusually large accommodation, including deck dining saloon, three staterooms, bath and two toilets. Handsomely finished and furnished. COX & STEVENS, 25 Broadway, New York.



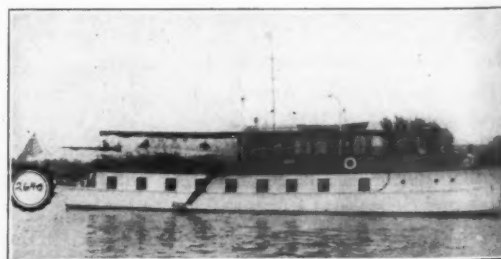
No. 3793—FOR CHARTER—Commodious twin-screw motor houseboat; 100x22x4 ft. Speed, 11-12 miles; two, 6 cyl. 125-150 H.P. Winton gasoline motors, new 1923. Splendid accommodations, includes double and single stateroom and living room in deckhouse; five staterooms and three baths below forward; dining saloon amidships. All conveniences. Cox & Stevens, 25 Broadway, New York, N. Y.



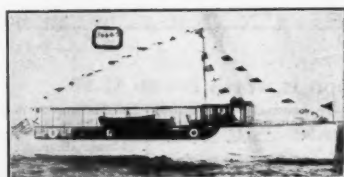
No. 2565—For Sale—Semi-houseboat type twin screw cruiser; 65x16x3 ft. Speed 11 miles; motors new this Summer. Saloon, two staterooms, bathrooms, etc. In Commission. Owner will accept low figure for quick sale. Cox & Stevens, 25 Broadway, New York.



No. 3489—FOR SALE OR CHARTER—Particularly attractive 90 ft. twin screw cruising motor yacht. Built 1917. Speed 13-14 miles; Winton Motors. Deck dining saloon, three staterooms, bath and two toilets. Handsomely finished and furnished. COX STEVENS, 25 Broadway, New York.



No. 2640—FOR SALE OR CHARTER—Modern twin-screw 80-ft. Mathis motor houseboat. Speed up to 12 miles; two 6-cylinder Standard motors. Deck dining saloon; below forward two double and two single staterooms, lobby containing transom, two baths and toilet room. Excellent condition. Cox & Stevens, 25 Broadway, New York.



No. 3664—FOR SALE—Twin-screw high speed 62-foot power yacht; speed up to 23 miles, two 6-cylinder 180 h.p. Speedway motors, new 1923. Enclosed bridge. Double stateroom, dining saloon with two transom berths. Cox & Stevens, 25 Broadway, New York.



No. 4245—FOR SALE—Attractive 48-ft. bridge deck cruiser. Recent build. Speed, 10 miles; 40-60 H.P. motor. Saloon with three berths, double stateroom, 2 toilet rooms. Cox & Stevens, 25 Broadway, New York, N. Y.



No. 4393—For Sale—High speed 50 ft. twin-screw cruiser. Speed up to 30 miles; two 6 cyl. 200 H.P. Sterling motors. Hull double planked mahogany. Stateroom, saloon, toilet room, etc. Cox & Stevens, 25 Broadway, New York.

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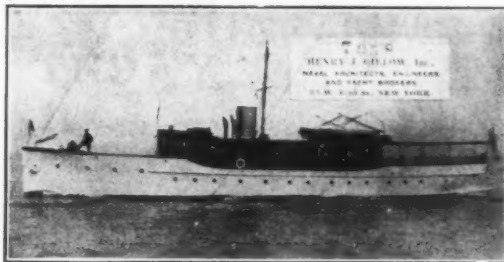
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Plans and specifications for new yachts of any size or type should be prepared now to assure delivery for next year. Have plans of new yachts, all types, on file now.

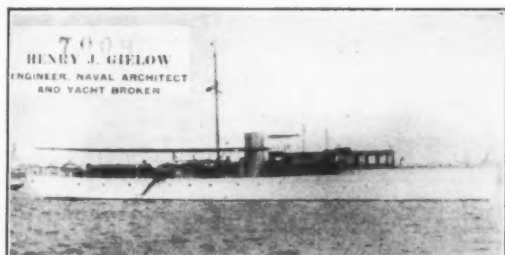
We have a most complete and up-to-date list of steam and motor yachts of all sizes, sail, auxiliary, and houseboats, on file in our office, kept constantly up-to-date by thorough and comprehensive canvass of the entire yachting field from time to time. We are in a position to submit full information on any type of boat upon request.



No. 8062—For Sale—Bargain. Mathis houseboat in commission 70'x16'6"x2'6", two Sterling motors, 10-11 miles. Refurnished and overhauled 1925. One double, two single rooms each with upper berth, sleeps 6-8. Bath. Fully equipped including launch tender. Ten foot saloon and deck saloon. Henry J. Gielow, Inc., 25 W. 43d St.



No. 7958—For Sale—Modern Diesel motor yacht, built 1923. 98'x15'x5'6", 170 H.P. Bessemer Atlas engine, speed 12-14. One continuous teak deck house has living room and dining saloon. Has two double, one single stateroom, bath, sleeps 8-12. All fine condition and complete. Henry J. Gielow, Inc., 25 W. 43d St.



No. 7008—For Sale—Fast 118-foot, twin-screw steel motor yacht with two six cyl. Winton motors, gives speed 14-16 miles. Deck galley and dining saloon. Three double staterooms, two baths. Handsomely furnished and most complete. Thoroughly renovated throughout 1920. Henry J. Gielow, Inc., 25 W. 43d St.



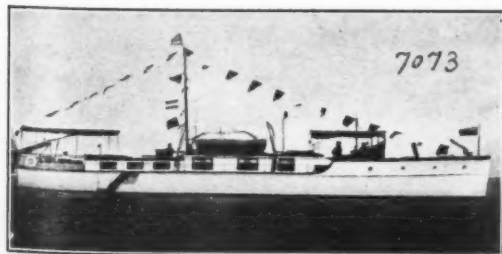
No. 8310—For Sale—Most desirable houseboat of size. Exceptional accommodations, double and single stateroom and saloon; sleeps 4-5; also deck saloon and bath. 45'x13'3"x3', strong construction, good finish. Good crew quarters and galley. Hot water, screens, complete equipment, Delco plant. Sixty H.P. motor, actual speed 9 miles. Immediate delivery.



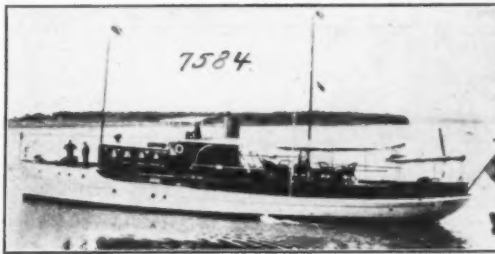
No. 7996—For Sale—Handsome mahogany fast runabout in commission. 36'x5'9"x2'6", built by Elco, 60 H.P. motor, speed 18-20 miles, good sea boat, accommodates 6-8 persons, finest condition. Desirable for Sound, St. Lawrence River or lakes. Economical. Price reasonable. Henry J. Gielow, Inc., 25 W. 43d St.



No. 9585—Exceptional bargain, in commission. Lawley built steam yacht, 101'x15'x7'8"; speed, 10-12 knots; radius, 500 miles. Very able and comfortable, also more economical than gasoline yacht similar size. Two large double rooms, bath, saloon, deck dining saloon. Perfectly appointed, all teak finish. Finest condition. Steam heat. Has cruised Maine coast to Nova Scotia. Genuine opportunity. Henry J. Gielow, Inc., 25 W. 43d St.



No. 7073—For Sale—In commission, reasonable price. 74'x14'x3'9", two 6-cyl. Speedway motors, 15-16 knots. Built by Lawley best manner. Three single rooms, bath, splendid light and ventilation, desirable for North and South. Completely appointed, fine condition. Opportunity. Henry J. Gielow, Inc., 25 W. 43d St.



No. 7584—For Charter—In commission New York, may sell also, as owner going abroad. 100'x17'x5', has largest accommodations any yacht of size. Double and single stateroom and bath forward; saloon, three single rooms and bath aft. Sleeps total 9-11. Two 6-cylinder 20th Century motors, new 1923. All new furnishings. Very able, large deck room and complete all details. Deck galley. Speed, 12-15 miles, and economical with six crew.

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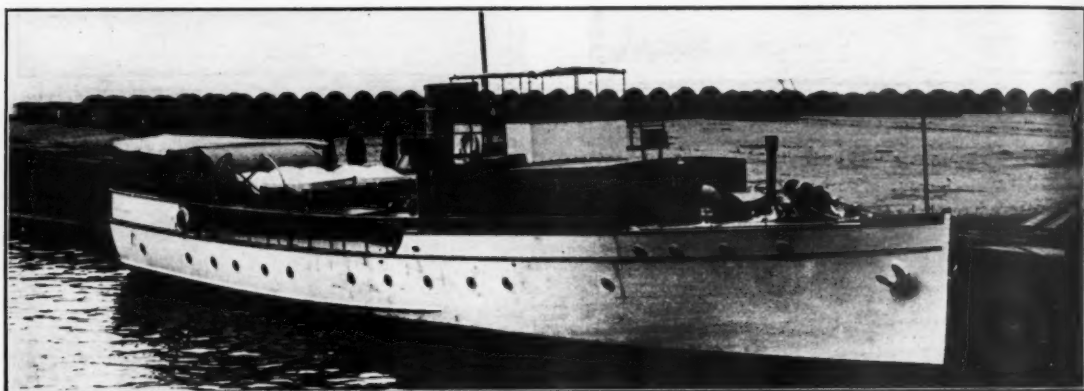
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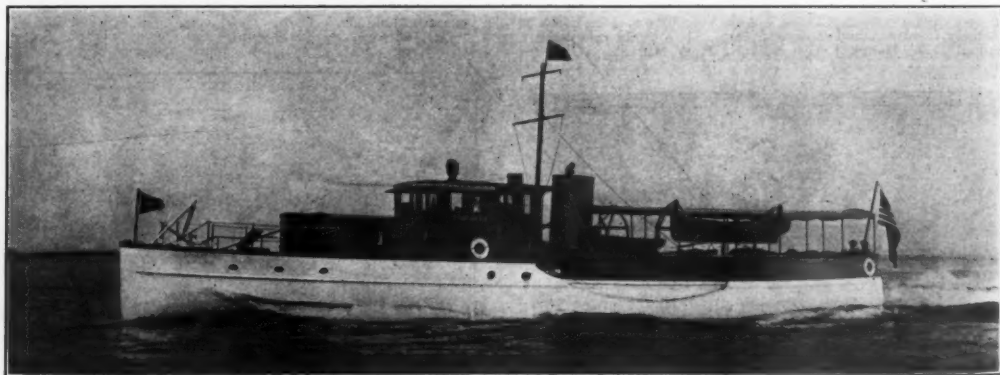
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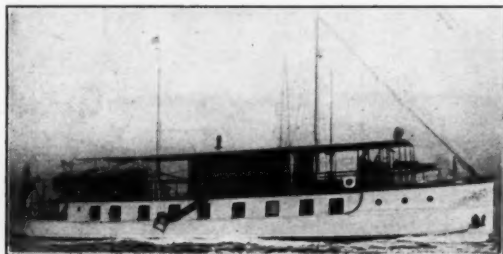
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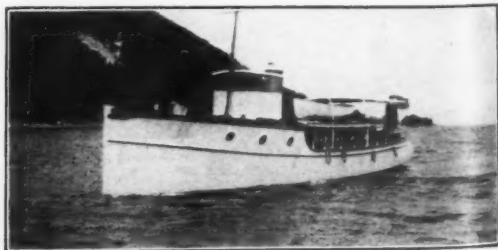
No. 9219. For sale. This attractive motor yacht, 100' overall, 19' beam, 5' draft, powered with two Winton Diesel 6-cylinder motors, giving a speed of 14 miles. Accommodations include six staterooms, two baths, large deck dining saloon and large after deck. Owner desirous of building larger yacht.



No. 7973. For sale. This attractive twin-screw motor yacht, one of the smartest and roomiest boats of her size. In perfect condition, two double staterooms, bathroom and large dining saloon. Inspectable in New York.



No. 1912. For charter for August and September this commodious 77' houseboat; speed, 10 miles. Has 4 staterooms, 2 baths, dining saloon and deck sitting room.



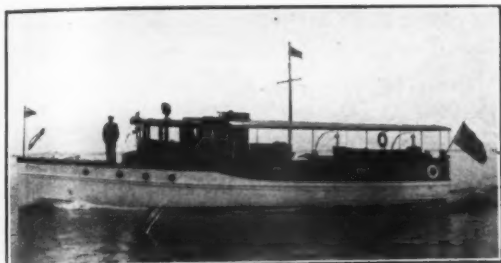
No. 8205. For sale—this attractive 50' raised deck cruiser with twin-screw motors of 50 H.P. each. Cabin with 4 berths, toilet, galley and crew's quarters for 2. Has separate lighting plant and over 6 feet headroom throughout.

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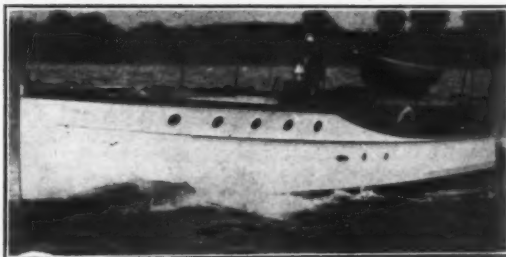
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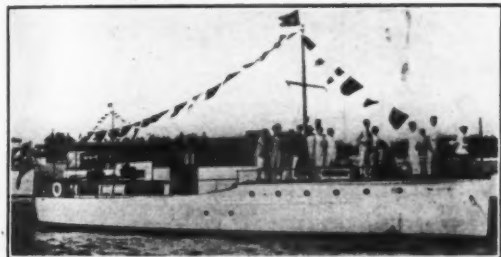
BOATS FOR SALE AND CHARTER



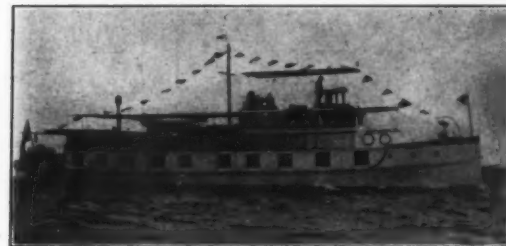
For Sale—55'x13'7"x3'3" enclosed bridge deck cruiser. 54 H.P. Standard engine, 6 cylinders, self-starter, Bosch double ignition and Atwater Kent system. Accommodations, large double stateroom, sleeps four in dining saloon. One of the most comfortable boats of her size afloat. For further particulars write Yachtmen's Service Agency.



For Sale—42'x10'x2'9" V-Bottom bridge deck cruiser. 129 H.P. 1925 Van Blerck engine. Homelight electric lighting and water system. Boat built 1923. Accommodations for eight and plenty of deck space. All controls from bridge. Speed 11 knots. A very fine and handsome yacht. For further particulars write Yachtmen's Service Agency.



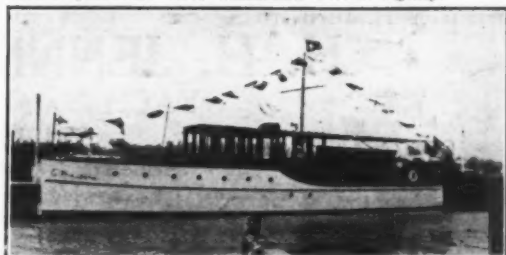
For Sale—56'6"x13'5"x3'2 1/2" twin screw enclosed bridge deck Elco cruiser, built 1924. Has Homelight electric plant, three sets of batteries, electric windless, bilge pump and fans for each stateroom. Boat fully equipped including all linen and silverware. Ideal for Florida cruising. Accommodations one double stateroom and two single staterooms, dining saloon and galley. Exceptionally commodious. For further particulars write Yachtmen's Service Agency.



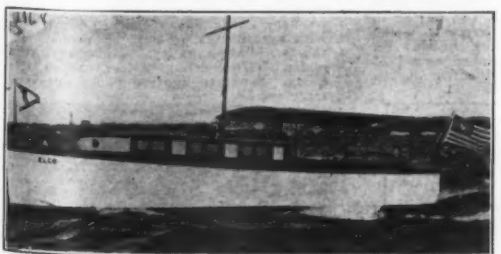
For Sale—85'x17'x3'6" Power Houseboat. Six cylinder, 50 H.P. Standard Engine. Delco lighting system. Two single and two double staterooms. Very comfortable and roomy boat. For further particulars write Yachtmen's Service Agency.



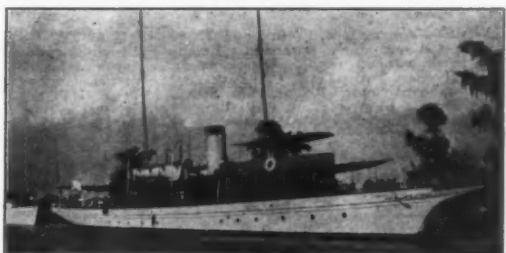
70'x16'8"x2'3" Powered House Boat. 2 6-cylinder Sterling engines; 3 state rooms—1 double and 2 single; 2 baths, large dining saloon, and deck saloon. Boat in good condition. For further particulars, write Yachtmen's Service Agency.



For Sale—58'x12'x3'6" enclosed bridge deck cruiser. 125 H.P., 8 cylinder Van Blerck engine. Three ignition systems and Delco lighting plant. Engine rebuilt 1925. Accommodations, two large double staterooms, toilet and bath with shower adjoining, dining saloon, galley and crew's quarters forward. Exceptionally large deck house. For further particulars write Yachtmen's Service Agency.



For sale Elco Cruisette, built 1921. 45 H.P. W.S.M., 4 cylinder, self-starter and generator. Electric lights and new storage batteries. Boat fully equipped and in excellent condition. Accommodations for four. For further particulars write Yachtmen's Service Agency.



For Sale—145'x17'3"x7'6" Steam Yacht. Steel hull in first-class condition. 600 H.P. Seabury engine. Very speedy and exceptionally economical to run. Large deck in stern. Very comfortable accommodations. Owner's quarters, 3 large staterooms and bath, large deck dining saloon and reception saloon. Excellent Sea Boat. For further particulars write Yachtmen's Service Agency.

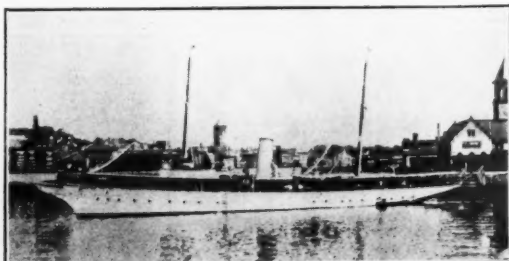
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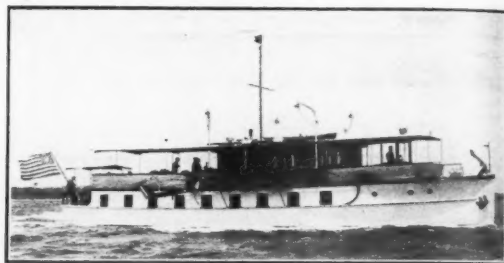
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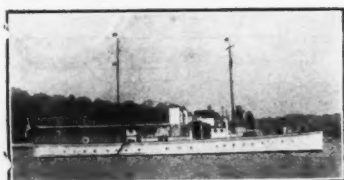
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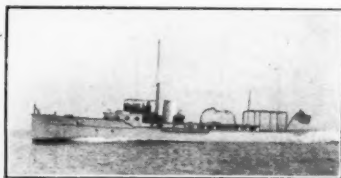
No. 2718—FOR SALE—165' Steel Steam Yacht—built by the Consolidated Ship Building Corporation—excellent accommodations—speed up to 19 knots. Not a new boat but has had very little use and is offered at an exceptionally low price. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.



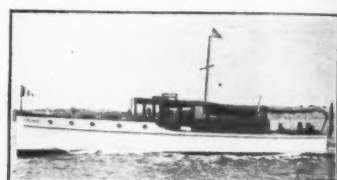
No. 5097—FOR SALE—60' Mathis Power House Yacht—Twin Screw—4 Double Staterooms—2 Baths—Deck Saloon. Attractive Price—FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.



No. 1872—FOR SALE—125' Express Cruiser—speed up to 20 miles—Twin screw—up to date design and build—Fine Sea Boat—Priced way below value. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.



No. 5186—FOR SALE—85' Express Cruiser—Lawley build—Twin screw—2 double and 3 single staterooms—speed up to 21 miles—considered one of the best yachts of this size. Reasonable price. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

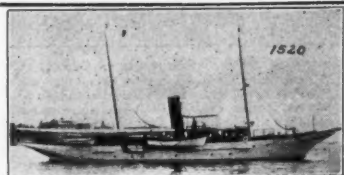


No. 7828—FOR SALE—50' Day Express Type—Cons. S. B. Corp. build. Less than two years old—good as new—speed better than 18 miles. Ready for immediate delivery. FRANK BOWNE JONES, Yacht Agent, 25 Broadway, New York.

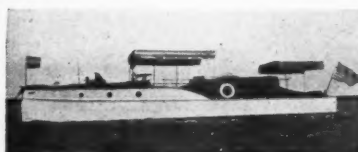
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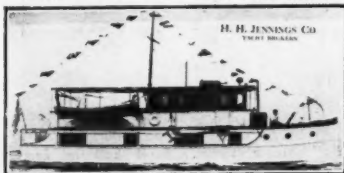
No. 1520—Power yacht, 106 ft. long. Three double and one single stateroom. Extension berth in main saloon. Dining saloon in deckhouse. Two toilets. One bath. 300 H.P. Standard motor. Rebuilt 1923. Speed, 13-14 knots. Electric plant, etc. Bargain for quick sale. Act quickly if you want her.



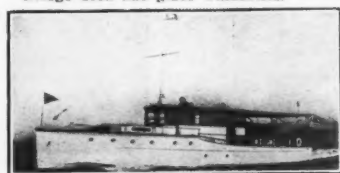
No. 2262—40-ft. Express Cruiser. Four berths in forward cabin and two berths in after cabin. Sleeps six persons. Toilet room. Mahogany and white finish. 300 H.P. Hall Scott motor, installed new 1922. Speed up to 28 miles. Electric lights. Bridge deck has glass windshield.



No. 2384—Canadian power yacht, twin-screw, 65 ft. long. Built 1919. Heavily constructed. Exceptionally roomy. Four staterooms. Large saloon, about 12 ft. long, with four berths. Sleeps ten people. Two toilets. Large galley. Mahogany deckhouse. Two Sterling motors. Speed, 12-16 miles. Separate lighting plant. Price attractive.



No. 4452—50' Power Houseboat. One double and one single stateroom. Two berths in main cabin. Toilet room with shower bath. Crew's quarters. 50-60 H.P. Standard Motor. Speed 11 miles. Delco Plant. Electric Ice Machine, etc. Good proposition.



No. 2653—56' Elco Cruiser. Twin Screw. One double and two single staterooms. Four berths in main saloon. Large deckhouse with berth. Two toilets, one bath. Crew's quarters. Two 42 H.P. Elco Motors. Speed 12 miles. Electric lights, etc. Fully equipped. Located in Florida.



No. 2020—Twin Screw V-Bottom 60' Express Cruiser. Built by Lawley. Double stateroom; two berths in main cabin. Bathroom. Large galley, etc. Two 135-180 H.P. Motors. Speed 20-25 miles. Price attractive.

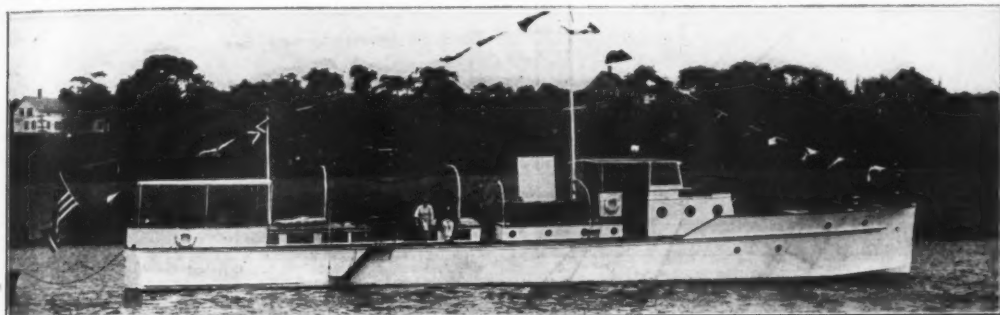
WILLIAM GARDNER & CO.

Naval Architects, Marine Engineers and Yacht Brokers

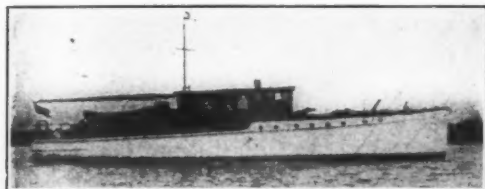
Phone 8638 Bowling Green

NO. 1 BROADWAY, NEW YORK

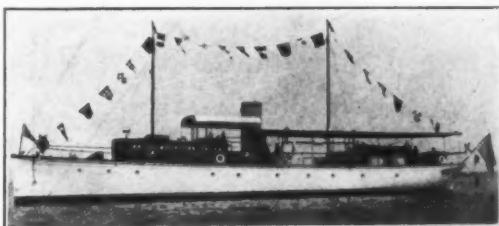
Cable Address: Yachting, N. Y.



No. 234—FOR SALE OR CHARTER—Attractive 85-ft. twin-screw Lawley built power yacht, equipped with two 6-cylinder 200 H.P. Sterling motors; speed, 16 miles. Deck saloon, 2 double and 3 single staterooms, bath room and additional toilet room. Everything in A-1 condition, ready for immediate use.



No. 2452—For Sale—Twin-screw power yacht, 72' x 15' x 4'. Two new 6 cylinder Sterling motors installed 1923. Speed, 15 miles. Sleeping accommodations for six or eight in owner's party.



No. 2331—Flush deck, power yacht, 90 x 16.5 x 5.6, equipped with two 6-cylinder Winton motors, has excellent accommodation and of staunch construction.

R. M. HADDOCK

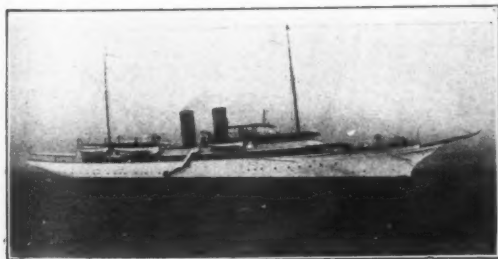
NAVAL ARCHITECT

MARINE INSURANCE

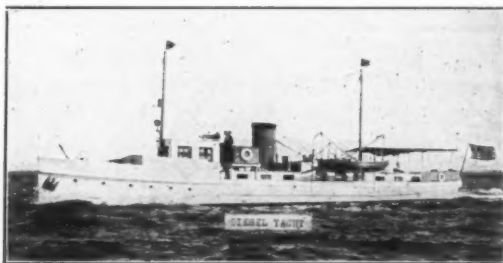
YACHT BROKER

50 EAST 42nd STREET, NEW YORK CITY

TELEPHONE, VANDERBILT 10400



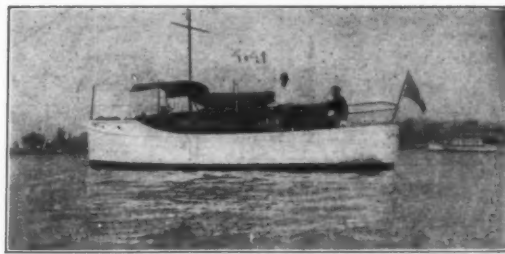
No. 136—FOR SALE—Large seagoing steam yacht, 263' x 29' x 10' draft. Palatial accommodations. Owner will sacrifice for immediate sale. For further particulars, apply to R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



No. 3017—FOR SALE—Diesel Motor Yacht, 77' x 14' x 6' draft—cruising radius 1600 miles at 10 knots. Two double staterooms and saloon. Deckhouse. Can be operated at one-half the cost of gas driven vessel same size. All motor controls on the bridge. For further particulars apply to R. M. HADDOCK, 50 East 42nd Street, New York City.



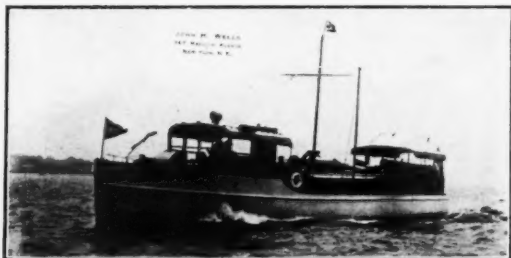
No. 3258—FOR SALE—Twin screw motor yacht, 70' x 14' x 3' 6" draft. New 1924. Two Speedway motors, speed up to 18 M. P. H. Accommodations consist of two double staterooms, bath room, large dining saloon forward; one of the finest yachts of her type available. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



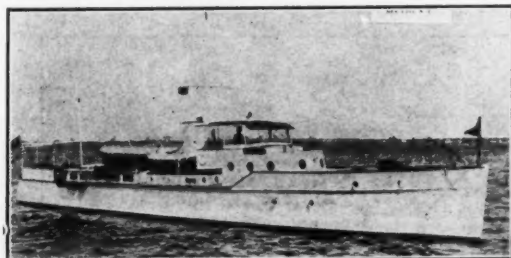
No. 4141—FOR SALE—Bridge deck cruiser designed and built by Harreshoff 1918. Sleeps 6 persons 22' x 8' 6" x 3' draft. Speed up to 18 M. P. H. For further particulars apply R. M. HADDOCK, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

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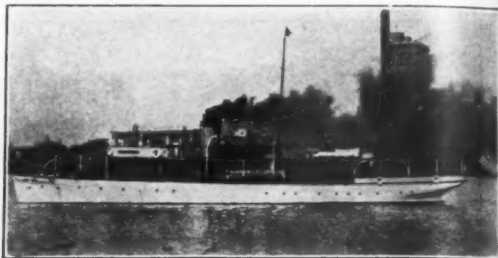
347 Madison Avenue, New York City. Telephone Murray Hill 3125.

Yacht Brokers


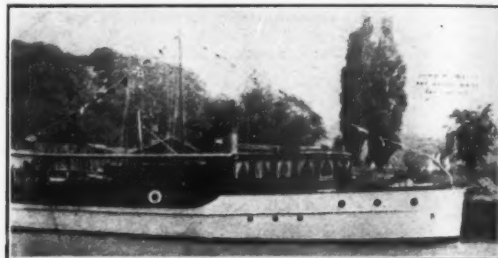
No. 293—FOR SALE—60 ft. Express cruiser, 11 ft. 5 in. beam, 3 ft. 8 in. draft. Powered with two 8-cyl. 5½/16" Sterlings. Speed 22 M.P.H. Double stateroom. One bath and one toilet. Large dining salon and galley. Can be inspected in New York. Price attractive. Further particulars, JOHN H. WELLS, INC., 347 Madison Avenue, New York.



No. 434—FOR SALE—One of the finest express cruisers afloat. 84 ft. long, 14 ft. 3 in. beam, 4 ft. 3 in. draft. Built by Lawley in 1920. Powered with two 6-cylinder 200 H.P. Sterlings. Speed 18 to 20 miles an hour. One double stateroom, four single staterooms. Dining salon in deck house. Everything in finest condition. Can be inspected at New York. Further particulars, JOHN H. WELLS, INC.



No. 2041—FOR SALE—Flush deck steel steam yacht. 122 ft. over all, 17 ft. beam, 6 ft. 6 in. draft. Excellent accommodations. Four double staterooms and 1 single stateroom. Two baths and 3 toilets. Hot and cold water in owner's quarters. Tiled baths. Two deck houses containing stateroom and dining salon. Arrangements are being made to convert to Diesel power. Further particulars, JOHN H. WELLS, INC., 347 Madison Ave., New York City.



No. 315—FOR SALE—65 ft. Power yacht. 13 ft. 9 in. beam, 4 ft. draft. Built 1923. Powered with two 4-cylinder 60 H.P. Standards, with self starters. Speed 12 M.P.H. One double stateroom, 1 bath room. Large deck house. Main salon below decks. Completely equipped and furnished. Delivered in commission. Further particulars, JOHN H. WELLS, INC., 347 Madison Ave., New York City.

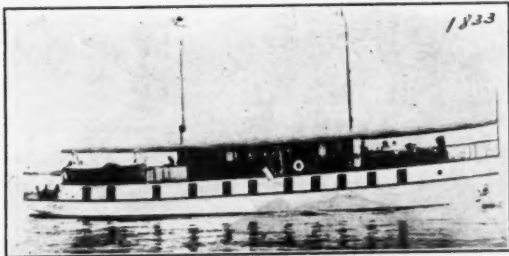
Telephone
Vanderbilt 0989
Cable Address
Yachtsan, N. Y.

HARRY W. SANFORD

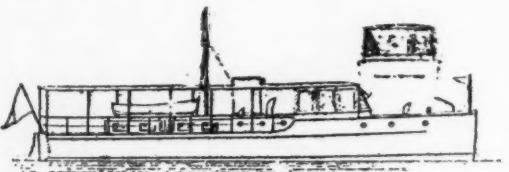
501 FIFTH AVENUE (42d ST.), N. Y.

YACHT BROKER
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APPRAISER

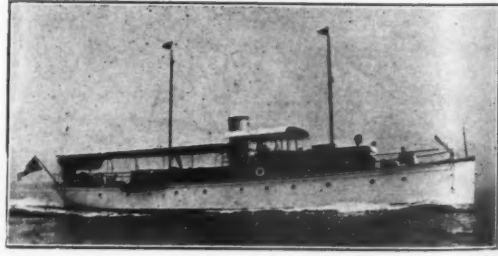
Our Motto: "To offer yachts, whether large or small, which will be a pleasure for you to own and a recommendation for us to sell; to render such service as to have you feel you would like to do business with us again."



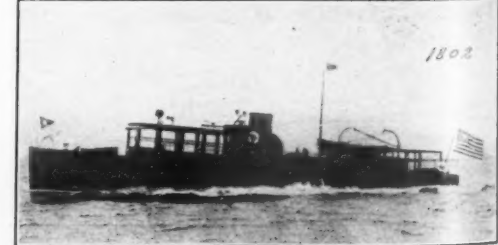
No. 1833—For Sale or Charter—100' twin-screw house-boat. 7 staterooms, 3 baths. Dining saloon on deck. Heated. A very commodious yacht in excellent condition.



No. 755—For Sale—Clean-cut, able and beautiful 60' twin-screw cruiser. Speed 18 miles. 2 Speedway motors with starters. 2 double staterooms and saloon; deck-house. Roomy bridge and after deck. Comfortable staterooms, and furnished in best possible manner.



No. 1694—For Sale—Attractive 90' twin-screw cruiser. Speed 13-14 miles. 3 comfortable staterooms, deck dining saloon, bath, etc. Winton 100 H.P. motors. Able, seaworthy and has had unusually good care. Can be recommended very highly.



No. 1802—For Sale—66' twin-screw express cruiser. Speed 28 miles. 2 double staterooms, 1 bath. Berth in deck-house. Excellent construction, fast and seaworthy.

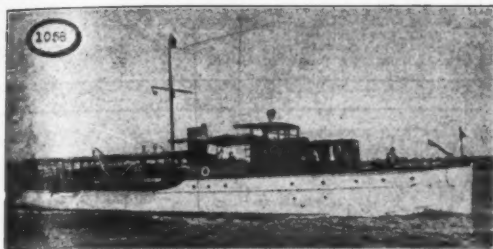
**YACHT BROKERS
NAVAL ARCHITECTS**

Henry C. Grebe & Co., Inc.

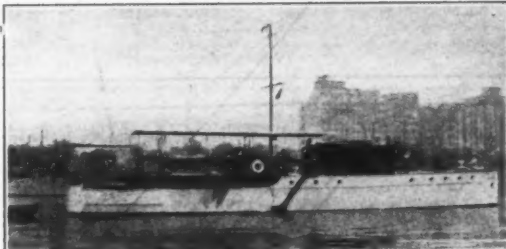
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**MARINE INSURANCE
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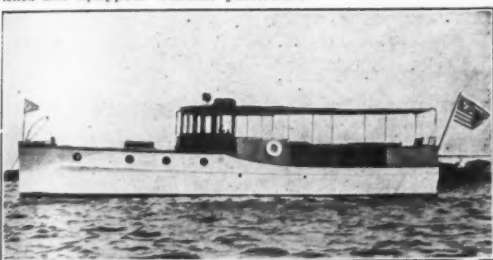
WE HAVE A COMPLETE LIST OF ALL STEAM AND POWER YACHTS, AUXILIARIES, AND HOUSEBOATS, WHICH ARE FOR SALE AND CHARTER. Plans, photographs and full particulars furnished on request.



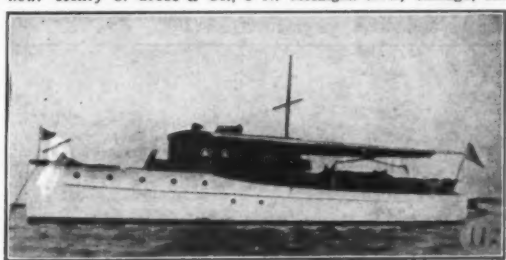
No. 1058—For Sale—Desirable twin screw cruiser new 1921 22' x 15' x 5'. Powered with two 80-110 H.P. 6 cylinder Winton motors. Large deck dining saloon. Very commodious. One double and single guest stateroom. Very attractively finished and equipped. Further particulars.



No. 985—For Sale—73 ft. x 13 ft. 6 in. x 3 ft. 6 in. twin-screw cruiser. Recent build. Two single and one double staterooms. Two toilets with showers. Dining saloon and deckhouse. A beautiful boat, mahogany finish throughout and as good as new. Henry C. Grebe & Co., 6 N. Michigan Ave., Chicago, Ill.



No. 1082—For Sale—45' x 11' x 3' 4" bridge deck cruiser. finest construction, mahogany planked interior and exterior beautifully mahogany panelled. Copper and bronze fastened thruout. Sleeps 6-8, has two toilets, separate engine room equipped with 6 cyl. motor, electric light plant. Price attractive.



No. 1120—For Sale—35 ft. x 13 ft. 6 in. x 3 ft. 6 in. draft modern twin screw deckhouse cruiser. Built 1923. Two double staterooms. Two medium duty 6 cylinder Scripps motors. Very attractive price for immediate sale. Henry C. Grebe & Co., Inc., 6 N. Michigan Avenue, Chicago, Ill.

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Late Models by Well Known Makers*

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SCRIPPS, E-4, with double ignition, 45-70 h.p.

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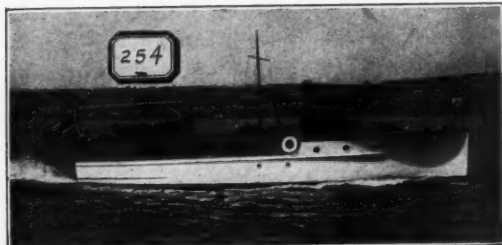
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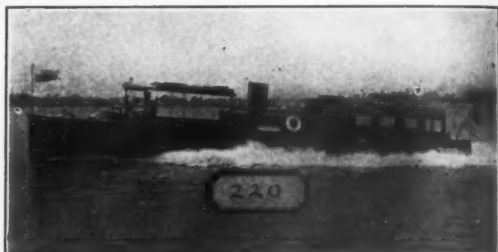
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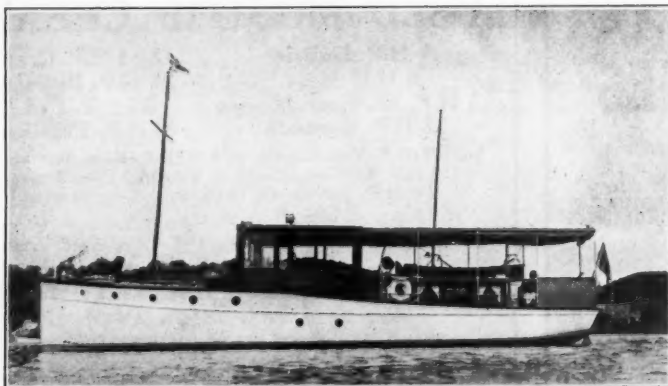
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No. 254—FOR SALE—Bridge deck cruiser, new 1924, 46'x11'x 3'3". Excellent accommodations. Charles D. Mower, 350 Madison Ave., New York City.



No. 220—For Sale—Express Day Cruiser. Condition perfect. 45'x8'x2" Liberty Marine Motor. Speed 25-30.



For quick sale after September first. Owner leaving for California. This fully equipped, specially built, 47 x 11 x 4, semi-bridge deck house cruiser; excellent sea boat; 35 H.P. heavy duty, self starting Palmer engine, speed 11 miles per hour. Owner's stateroom aft; saloon forward sleeps four; additional accommodation for one in crew; three toilets; 32 volt electric light plant; inspection and particulars at Ernest Johnson's Shipyard, City Island, New York City. Ask for Yacht "Kiwi."

FOR SALE—Alamo 32-volt electric plant, \$75.00 Class III brass boat lights, bow, running and stern, \$12.00. W. Hansen, Niles, Mich.

FOR SALE—The two Passenger Boats of the Lambert Excursion Line, Toms River, N. J. Each are 40x12.5x3; excellent sea boats. With very little expense can be made into commodious houseboats. Will be sold for less than half what it will cost to build. Can be seen running until Sept. 14. Ira C. Lambert, Box 314, Toms River, N. J.

Best prices paid for used or new marine engines in any H.P., make or model. A. H. Lauson, 215 North Ave., Milwaukee, Wis.

Notice to Manufacturers—For sale: 600 brand new, one or two cylinder Dixie magnetos with genuine platinum points. \$3.75 each for entire lot. CRAWFORD AIRPLANE CO., Venice, Cal.

A RARE BARGAIN—Trunk cabin cruiser 26 ft. x 7 ft., equipped with 20 H.P. Kermath full legal equipment, tight as a bottle and everything in first class shape; \$800. Wm. Bruns, 50 W. 17th St., N. Y. C.

1,000 original cash order letters from amateur boat builders. \$20.00 takes them. All dated last twelve months. Weesho-Uco, 31st St. Station, Detroit, Mich.

FOUR CYL four cycle with gears:—Automatic 6 1/2x8, \$750; Miller, 5 1/4x7, unit plant, \$450; New Model, 5 1/2x7, \$450; Peerless, 5x6, with electric starter, \$475; Lamb, 5x6, \$195; Holliday, 5x6, \$245; Doman, 4 1/2x6, \$315; Beaver, 4x5, \$175; New Model, 4 1/2x6, \$285; Kermath, 4x4, \$325; Gray Model D, \$225; Perkins, 2 1/4x4, \$115, and others.

FOUR CYCLE:—Wolverine, three cyl. 6 1/2x7 1/8, \$375; Clifton, 3 cyl., 7x9, \$285; Automatic two cyl., 5x6, \$175; Frisbie, one cyl., 6x6, \$115; Doman, 2 cyl., 5x6, \$165. All with gears.

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BADGER MOTOR COMPANY,
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WANTED—30 to 2 1/2 foot water line auxiliary ketch or sloop. Preferably with center-board. Address: Russell, care MoToR Boating.

WANTED

Experienced man who knows how to handle workmen, and figure on estimates in the boat building business. Preferably one who can invest a few thousand dollars. All correspondence confidential. Postoffice Box No. 1568, New Orleans, La.

WANTED—Cabin cruiser or skiff for deep sea fishing. 15 M.P.H. or better. Delivery prompt in Atlantic City. Box 156, Motor Boating.

Motor Boat Captain and Chauffeur, 33, single, desires good position; 12 years' experience, good mechanic; best of reference. Box 157, Motor Boating.

BEHIND every rebuilt motor we sell is over twenty-five years' experience, up-to-date rebuilding methods, an iron clad guarantee and best of all an honest desire to treat our customers fairly.

Machines of practically every size and type are ready for immediate delivery.

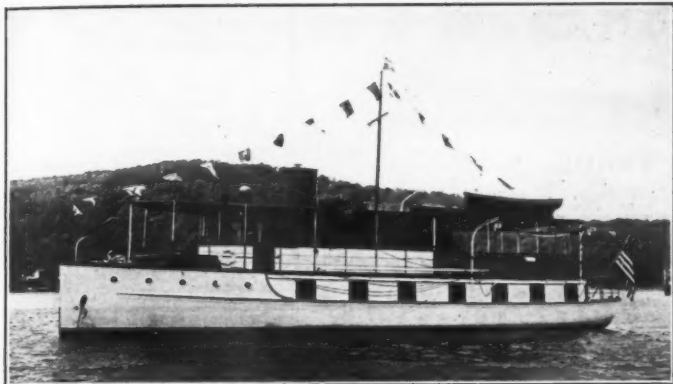
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A REAL BUY:—Several different sizes in 6-12-24 and 32 volt genuine Edison nickel-iron non-acid rechargeable storage batteries purchased from the government and other large users at 1/5th their original cost. Guaranteed perfect and look equal to new. Built like a watch. Do not sulphate or lose their charge standing idle. May be left in any condition, overcharged and complete short-circuited with no harm. Write now for free literature and send your storage battery problem for years to come. Address B. I. Smith, 51 Washington Ave., Danbury, Conn.

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WANTED by November First, salt water cruiser, 35 to 45 feet, speed better than ten miles. Twin screw preferred. E. R. Gowing, Fine View, New York.

FOR SALE—Sedan day cruiser, 26'x8'6", V-bottom. Red Wing motor, 28-36 H.P. Electric starter, lights, mahogany finished hull, 3 years old. Speed, 16-18 m.p.h. Now at Hudson River. Price, \$1,300. Alex. Kaute, 256 W. 108th St., N. Y. C.

Twin 400 H.P. Murray & Tregurtha, 6 cylinder, high speed, completely rebuilt and guaranteed. Bargain. **BRUNS KIMBALL & CO.**, 50 W. 17th St., N. Y. C.

EXCEPTIONAL BARGAIN:—47' single step Hydroplane, automobile control—fully equipped with brand new 300 H.P. Fiat motor, self starter, generator, speed up to 40 M.P.H. Payne Co., 35 Wall Street, New York City.

Sales Engineer Wanted!

By leading manufacturer of Full Diesel Engines.

Salary and commission basis and fertile field afford exceptional opportunity.

Previous experience with Industrial and Power Plant equipment desirable. Box 159.

50 H.P. high speed Kermath, double ignition, starter and generator, etc., completely rebuilt and guaranteed. A bargain, engine like new. **BRUNS KIMBALL & CO.**, 50 W. 17th St., N. Y. C.

FOR SALE—Bargain, 30-foot trunk cabin cruiser; \$750; fully equipped; photo and description. A. M. Bidwell, 410 Main St., Middletown, Conn.

FOR SALE—27'x7' cedar, double planked, three passenger, gentlemen's racing runabout, 500 H.P. Liberty motor, 55 M.P.H.; 25'x5'6" Gold Cup type, double planked, mahogany, 7 passenger runabout, 220 Hispano motor; 16'x4' hydroplane, 25 H.P. Pierce Budd motor. Box 365, Red Bank, N. J.

Worked Bridge deck V Bottom Cruiser, 36' to 38', Hackin or Hord design. Speed about 10 miles. Must be bargain. Prefer it in Fla. waters. J. S. Knight, Braderton, Fla.

50 H.P., 6 cylinder, high speed Wisconsin White Cap, 1924 model, starter, generator, etc., complete, rebuilt, guaranteed. **BRUNS KIMBALL & CO.**, 50 W. 17th St., N. Y. C.

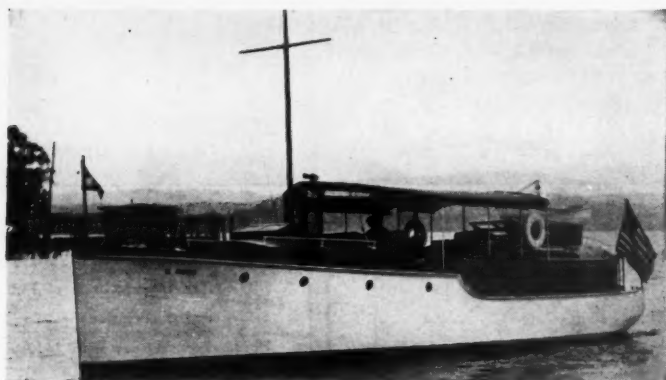
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Your own yacht in Florida next winter will cost less than hotel bills. Cruising houseboat accommodating seven in owners party for charter. Comfortable, safe, complete. Inspectable at Atlantic City. Address Florida, MoToR BoatingG.

WANTED—Bridge deck cruiser, 42-50 ft., speed not over 12 mi. Must be in good condition and priced right. Mention builder. Photo should accompany detailed description. Great Lakes location preferred. Box 153, MoToR BoatingG.

Twin 300 H.P. Fiat, 6 cylinder, high speed, completely equipped, in A-1 shape. Will consider offer for one or pair. **BRUNS KIMBALL & CO.**, 50 W. 17th St., N. Y. C.

FOR SALE—29' V-bottom runabout—6 1/2' beam—all mahogany, including bottom, which is of double thickness with canvas and marine glue between. Seats comfortably 7 in rear cockpit and 4 in front. 6-cylinder G-R Sterling engine. Speed, 40 miles plus. In very excellent condition. Priced at \$4,500.00 for quick sale. For further particulars write G. H. Brodie, Packard Motor Car Company, Detroit.

NOW IS THE TIME to prepare for next summer. Build yourself a good boat during the fall and winter. Blue print copies of excellent designs can be obtained at reasonable prices. Write F. W. Horenburger, 4263 Byron Avenue, Bronx, N. Y.



FOR SALE OR TRADE

This exceptionally fine 44' bridge-deck cruiser, 11' beam, 2 1/4' draught, speed 12 miles, accommodates four in party and one paid hand. Entire boat just overhauled and in A-1 condition; inventory complete. Will sell or trade for small cabin cruiser—not more than 32' long, with speed of at least 15 miles. The price is right; inquire of your broker or Russell S. Cox, Monroe, N. Y.



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For Sale—Elco 28 ft. mahogany runabout—double cockpit, automobile control, fully equipped with brand new 250 H.P. motor—self starter, generator, electric lights, speed up to 40 M.P.H., Chas. H. Payne, 35 Wall St., N. Y. C.



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REPAIRS

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(Continued from page 52)

*Universal Employees
Entertain*

A very successful outing and get-together party was given to the employees of the Universal Motor Company recently by the company. A large boat had been chartered for the day, and made a pleasure trip to Tustin nearby. The destination was E. H. Fahrney's summer home, and after taking him aboard, the entire party proceeded to the Tustin Hotel, where a dinner was enjoyed. Athletic games and contests were the attraction for the afternoon, and altogether the day proved to be most enjoyable.

Autopulse Fuel Pumps

The demand for the modern system of fuel supply, the Autopulse, has been sufficiently heavy in the vicinity of New York to warrant the Hall-Scott service station to lay in a large stock of these accessories, and they are now available without delay. Mr. Utz, in charge of this station, advises that they are prepared to effect any combination of these pumps to supply any possible requirements for fuel.

The Houseboat Rascal

A new boat, 57 feet in length, has just been built in Maine at Staples & Johnson's Shipyard, for S. G. Etherington of New York, and has been called Rascal. The boat reflects the experience of the owner, and is tastefully arranged and finished. The power plant is a four-cylinder 50-60 h.p. 6½ by 8-inch Standard engine, which turns a 30-inch diameter, 30-inch pitch propeller, at 600 r.p.m. The speed of the boat is 12 m.p.h., which is very excellent for a large craft of these dimensions.

Loew-Knight Sales from Headquarters

The Loew Manufacturing Company announces that they have established sales headquarters for Loew-Knight engines at their main plant in Cleveland, Ohio. Effective at once, all general sales work will be conducted there, instead of being handled through a distributor, as heretofore.

McNab Offices at New Plant

Due to the increased demand for the McNab Rudder, the McNab Kitchen Rudder Corporation have been compelled to seek increased accommodation, and their new offices and plant are now located on Connecticut Avenue, Bridgeport. The American Engineering Corporation of Philadelphia have entered into a contract with the McNab Kitchen Rudder Corporation, whereby they will manufacture electric and air power gear devices, which will be used for the operation of the McNab rudders on the heavier types of boats, thereby eliminating the more difficult hand operation. For the use of small outboard engines, such as the Johnson, Evinrude, Lockwood-Ash, etc., a special form of McNab rudder is made, which is handled by a detachable lever, which can be readily removed. The speed control is obtained by raising and lowering the tiller, providing wide range of forward and reverse speeds. Due to the rapidity of action of this control, sensational maneuvering is secured by these little engines.

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to meet most requirements.

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rooms—all outside with bath—and the
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DETROIT

500 Rooms—500 Baths

He Was Mistaken

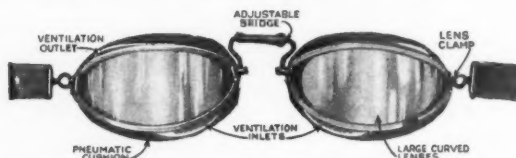
L. W. Ferdinand & Co., importers and manufacturers of marine glue, recently received a complaint from a company who is an occasional purchaser of marine glue that some of his decks showed long spaces where the glue had broken away from the wood on one side of the seam due to lack of elasticity. The marine glue seemed dead and lifeless.

The customer was asked to advise more of the detail regarding the condition of the craft and if possible a sample of the goods. And what do you suppose was his reply:

"Since writing you we have discovered that this is another make of glue. We wish to thank you, however, for the information given us as this is just what we wish to find out."

(Continued on page 94)

Speed Kings of AIR, LAND and WATER Use LUXOR GOGGLES



LUXOR GOGGLES are accepted by noted aviators, auto drivers and speed boat drivers as the most practical and comfortable goggles that can be procured. They are used by the foremost drivers of all classes of speed craft and afford the utmost protection from wind pressure and glare, without obstructing the vision or causing the slightest discomfort.

Luxor's light metal construction, adjustable nose bridge and comfortable rubber cushions all contribute to perfect and easy fitting to the face. Ventilation is scientifically arranged through inlets and outlets. Fogging of lenses is impossible. Prescription lenses if needed. Regular lenses supplied with white or tinted glass.

Luxors are used by such famous racing drivers as Peter de Paolo, Tommy Milton, L. L. Corum, Harry Hartz, Louis Chevrolet, Cliff Durant, Ralph DePalma, and countless others.

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Telescopes—Microscopes—Binoculars—Barometers—Meteorological Instruments—Cameras and Supplies



Baby Claire Wins Again

(Continued from page 36)

Many ladies were aboard different boats, and the trip made a pleasant day's sail for all.

At the crack of the gun, Starlight quickly forged ahead by reason of her greater speed. A new propeller and a tuning of the engine had produced another hundred revolutions and made her very fast. Since the contestants sailed directly away from the observers on the committee boat, it was difficult to tell how they were spreading out. It was apparent that they were pretty evenly matched and were well bunched for as long as they were in sight.

As was expected, Starlight was the first to round the turning mark at Scotland Light, and Baby Claire IV was right at her heels, being only seventeen minutes behind her. Algos, from the New York Motor Boat Club, was another ten minutes behind, and the rest of the fleet followed in quick order.

The tide had been estimated to turn about the time the fleet struck the Narrows on the way back. Somehow the tide was a bit behind the predictions, for most boats had an adverse tide for a time. In fact, Starlight was entirely through with the race before the tide really began to run flood again in any strength. The boats which finished later had much more benefit from this than the earlier ones.

There were only two of the contestants who dropped out during the contest. Shadow, which started with a cracked jacket, developed further ailments and had to withdraw. Paducah, owned by Commander Downey, Jr., of the Brooklyn Power Squadron, also had slight engine troubles and did not attempt to finish.

As in the Bear Mountain Handicap Race, earlier in the summer, Baby Claire IV was the winner of the handsome sterling trophy, presented by Commodore Heilner for this race. The second place went to Cleo, an International 32-foot cruiser, powered with a Kermath engine, and owned by R. Raubitschek, while the third place was taken by Algos, owned by R. F. Ponce of the New York Motor Boat Club.

Handicaps were figured and apportioned according to the 1925 American Power Boat Association rules, and on corrected time it will be noted that the first five boats to finish were only eighteen minutes apart, the actual time difference was one hour. It would therefore seem that the rule is a good one, such factors as navigation, as well as boat and engine handling, are contributing factors to success.

As on the occasion of the Bear Mountain Race, the Colonial Yacht Club extended its privileges to the visitors and outdid itself in the dinner and entertainment provided for their guests. It is quite certain that all those who took part in the dinner will need no urging to attend any subsequent affairs if they are conducted by the Colonial Yacht Club.

A complete summary of the race results follows:

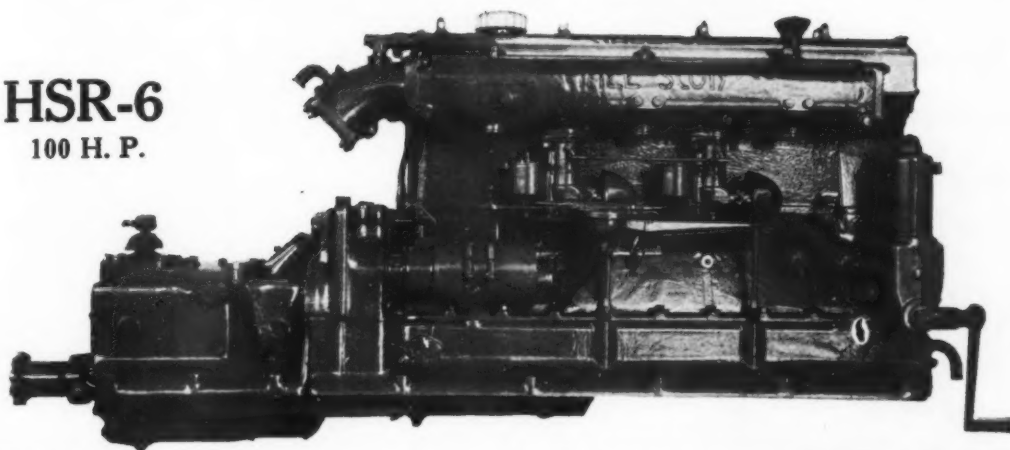
Scotland Lightship Race—Colonial Yacht Club 50 Nautical Miles, July 19, 1925

Boat	Owner	Club	Rating	Allowance	Elapsed Time	Corrected Time	Position
Shadow	Wm. A. Joy	Yonkers Y. C.	50.27	.....	D.N.F.	.....	4
Starlight	W. H. Sterling	Tamaqua	44.16	0:34:33	4:42:00	4:07:27	1
Venture II	B. Siegel	Colonial	40.65	0:58:56	6:03:45	5:04:49	8
Margareth II	N. Nelson	N. Y. M. B. C.	37.78	1:22:04	6:31:05	5:09:01	9
Baby Claire IV	F. V. Borick	N. Y. A. C.	36.73	1:31:39	5:22:20	3:50:41	1
Redcyl	J. R. Huntley	Sheepshead	36.42	1:34:34	5:42:25	4:07:51	5
Maja	C. P. Sullivan	Sheepshead	36.01	1:38:29	6:30:20	4:51:51	7
Algos	R. F. Ponce	N. Y. M. B. C.	35.85	1:40:01	5:40:20	4:00:19	3
Brickton III	A. L. Bobrick	Colonial	35.33	1:45:18	6:10:15	4:24:57	6
Paducah	P. J. Downey, Jr.	Sheepshead	35.15	1:47:03	D.N.F.	.....	2
Cleo	R. Raubitschek	Colonial	34.48	1:53:53	5:51:55	3:58:02	2

Advertising Index will be found on page 146

The Newest HALL-SCOTT

HSR-6
100 H. P.



HSR Series with 3 to 1 Gear Reduction and 100% Reverse

THE new Hall-Scott models, HSR-4, 70 H. P., and the HSR-6, 100 H. P., mark a big stride forward in the adaption of fast turning motors for heavy duty service. The HSR series has a sliding gear type of transmission or reverse gear, with a 3 to 1 noiseless gear reduction on forward drive, free neutral and 100% reverse speed.

The reduction gear has long been predicted for marine engines but the problem has always been to get an *efficient, trouble proof* and *quiet* gear. The new Hall-Scott reduction gear is the first to attain these desirable qualities. It

is noiseless and friction loss is so small as to be negligible—100 H. P. is delivered by the HSR 6-cylinder and 70 H. P. by the HSR 4-cylinder on the propeller shaft.

This new type of engine enables you to secure the *moderate weight* and *efficiency* of the latest and highest type of fast turning marine engine for heavy duty service. With the engine running at 1800 R.P.M. the propeller speed is 600 R.P.M. or 900 R.P.M. with a 2 to 1 reduction ratio. This provides a *high grade* dependable engine for houseboats, auxiliaries and heavy cruisers. HSR 6-cylinder engines have been run for about a year under the supervision of Col. E. J. Hall so the efficiency of the HSR is fully demonstrated.

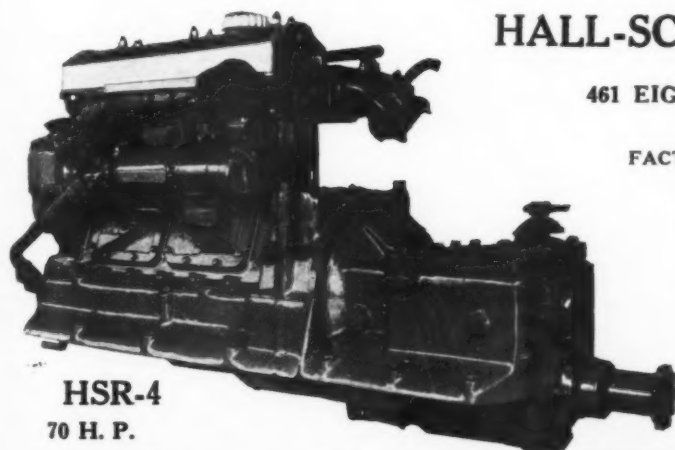
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HSR-4
70 H. P.

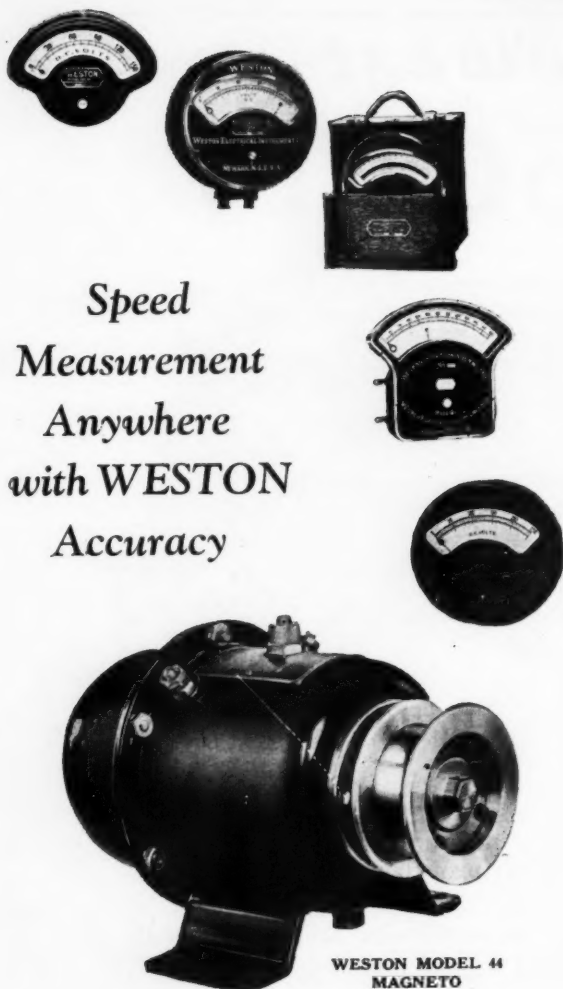
COMPLETE LINE OF HALL-SCOTT MARINE ENGINES

HSM-4	58-70 H. P.	1200-1800 R. P. M.	1200 lbs.
HSM-6	70-100 H. P.	1200-1800 R. P. M.	1500 lbs.
HSR-4	70 H. P.	600 or 900 R. P. M.	1775 lbs.
HSR-6	100 H. P.	600 or 900 R. P. M.	2200 lbs.
LM-4	125 H. P.	1700 R. P. M.	1200 lbs.
LM-6	200 H. P.	1700 R. P. M.	1500 lbs.

When writing to advertisers please mention MOTOR BOATING, the National Magazine of Motor Boating, 110 West 40th Street, New York

Ignition—A Boy's Story of Engines

(Continued from page 28)



Speed
Measurement
Anywhere
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Accuracy

WESTON MODEL 44
MAGNETO

Every conceivable form of rotational speed measurement can be successfully solved with the Weston magneto speed indicator.

Its wide range of applications in power and industrial plants and in transportation systems by land, air or water, etc., mark it as the most valuable commercial type of speed indicator.

The magneto mounts directly at or near the apparatus to be measured while the indicator may be located at any desired position remote from the apparatus. The indicator can be scaled to read in R.P.M., M.P.H., Feet per Minute, Units of Production, or in any other units as desired.

For further information
write for Bulletin 3004

Weston Electrical Instrument Corporation

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Newark, N. J.



number one cylinder. Passing on, the rotor touches the segment which is connected with number two coil, and the high-tension current flows to number two cylinder. The timer is provided on the outside with an arm by which the fiber member may be rotated slightly around the shaft in order to advance or retard the time of delivering the current to the cylinders.

The final device in the high-tension system is the spark plug, which is connected by wire with the secondary winding of the coil and which grounds through the engine. The spark plug is made of a steel bushing or shell which is threaded to screw into a hole in the cylinder head; a core of porcelain or other non-conducting material which fits into the shell and which encloses a heat-resisting wire; and a terminal at the top of the porcelain at which the electrical connection is made. Some spark plugs are made in one piece, the porcelain being fused into the shell. Others may be taken apart for inspection and cleaning, and with these a brass collar is used to hold the porcelain firmly in the shell.

The wire in the porcelain ends at the mouth of the shell where it almost meets a very short piece of wire which is permanently attached to the latter. The space between these two wires is the *spark gap*, and the wires themselves are called the *sparkling points* or *electrodes*. When the plug is screwed into the cylinder the sparking points stick out into the combustion chamber.

The electric current, after traveling down the wire in the center of the porcelain, comes to the spark gap and finds that it no longer has a clear path. It therefore jumps the gap to the other electrode and in so doing creates a hot spark. The primary current from the battery has not sufficient strength to jump this gap. All of the instruments, wires, etc., in the ignition system are arranged for the two purposes of inducing a current strong enough to jump the gap and of making it jump at the exact instant when the compressed gas in the cylinder is ready for explosion.

In different spark plugs there are many different types of electrodes besides the ones just described. The purpose of all of them is to provide a gap about a thirty-second of an inch wide, to resist burning or warping of the metal by arcing or the heat of the explosion, and to provide a fat, hot spark. If the electrodes are too far apart the current will not be strong enough to bridge the gap; if they are too close together or if they are caked with carbon, the current will flow from one electrode to the other without sparking.

The foregoing description is intended only to give a general idea of the jump spark system of ignition. Before leaving the subject, a few points of additional information should be considered. In modern motors, instead of having one coil for each cylinder, we usually find a master coil that does the work for all cylinders. With such a coil a *distributor* is used in addition to the timer. The timer, as already explained, is hooked up in the primary circuit, and times the instant of inducing the high-tension current in the coil. The distributor, which is often mechanically combined with the timer, is connected with the secondary circuit and distributes the induced current to the cylinders in proper rotation.

When a magneto is used as a source of electricity, it is designed in a great number of instances so that it combines the work of timer, coil, and distributor in one package. The high-tension magneto is driven off an engine shaft, and, like the timer, is so arranged that the instant of delivering the spark to the cylinders may be retarded or advanced.

The need for advancing the spark may require a short explanation. When the motor is started, it naturally moves very slowly for the first revolution or two. At this slow speed the spark should occur in the cylinder *after* the piston has started down the cylinder on the firing stroke. If the explosion were to occur *before* the piston had gotten over the brow of the hill, it would kick back and might injure the starter, mechanical or human. However, there is an appreciable delay between the time when the spark jumps in the plug, and when the gaseous mixture in the cylinder is fully ignited. This delay, which is known as the *lag*, is always the same whether the motor is going slow or fast. The speed of the piston, on the other hand, is a variable quantity.

Now, to explain the effect of lag and piston speed by exaggerating it, suppose that half a second elapses between the occurrence of the spark and the firing of the charge. Suppose also that it takes the piston two seconds to move from the top of the cylinder to the bottom. If the spark jumps when the piston is at the top of its stroke, it travels a quarter of the way down before the explosion occurs. But when the engine runs twice as fast and the speed of the piston is doubled, then the piston will be half way down in the half-second of lag. Thus a great deal of power will be wasted.

(Continued on page 70)

Take along a "Super-Het"



At Home— the same Radiola

Radiola 26 is a portable Super-Heterodyne. Its loop is in the cover—its batteries inside—its loudspeaker built-in. Just pick it up—take it along—and tune in.

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Then—at home again—the same set has a battery cabinet that matches it in fine walnut finish, and turns it into a home set for your living room.

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UP the streams to the September woods. Down the rivers between trees turning to gold and russet. Miles from land on rippling seas. Wherever you go—take along a portable Radiola Super-Heterodyne.

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PHILADELPHIA

Importers of Pearls, Diamonds and Precious Stones
Watches and Clocks

Designers of Fine Productions in Gold and Silver

Makers of:

The Carl G. Fisher Gold Trophy

The Wood-Fisher Gold Trophy

Ignition—A Boy's Story of Engines

(Continued from page 68)

However, suppose we advance the timing so that at this double piston speed the spark jumps when the piston is half way up on the compression stroke. In the half-second of lag the piston will then move to the top of its stroke and start down just as the full force of the explosion is felt.

Actually the lag amounts to the very smallest fraction of a second, while in a high-speed motor the piston may make as many as 800 strokes a second. But whatever the speed of the motor the spark may be advanced or retarded so that the piston begins to feel the power impulse just as it starts down on the firing stroke.

The Make-and-Break System

In many types of motors the make-and-break system is used instead of the jump-spark. There are two major differences between these two systems. The first of these is that the make-and-break employs a movable igniter inside the cylinder instead of a fixed spark plug. The second is that the make-and-break operates on a low-tension instead of a high-tension current. The low power current does not short-circuit so easily as the other when wires are damp, and the engine will continue to run on this system even when the engine is wet with spray or rain.

Mechanically, however, the system has its disadvantages, for the reason that the movable igniter will wear or burn or get out of order with continued use.

The source of the current is the same as in the previously described system—that is, either from battery or magneto. A coil is also used, but the coil for the make-and-break has only one winding and does not require a vibrator or condenser. Similarly the magneto has only one winding, and the magneto need not be geared to the engine, but may run by belt or by a pulley off the flywheel or propeller shaft.

Starting at the source, the current flows to the low-tension coil, where it passes around the core of iron wires and is slightly intensified in so doing. From the coil it flows directly to a fixed electrode or igniter, which is mounted in the cylinder head, one end extending into the firing chamber. This electrode is insulated from the rest of the engine by mica washers or other non-conductors.

The movable igniter, above referred to, also extends from the outside to the inside of the cylinder. It is installed so that it will rotate slightly, and is shaped with a right-angle arm at top and bottom. The end of the inside arm is fitted with a platinum alloy or iridium tip and is placed so that it will make contact with a similar tip on the fixed electrode. The two tips are normally held apart by a spring on the outside arm of the movable igniter.

On the outside of the cylinder there is a vertical rod which, as the engine rotates, is moved up and down by a cam or eccentric. This eccentric is driven off the crankshaft in the case of a two-cycle motor and off the camshaft on a four-cycle motor. In both cases the vertical rod is provided with suitable connections so that as it is pushed up by the eccentric it presses the outer arm of the movable igniter and forces the inner arm into contact with the fixed igniter. As the two platinum contact points come together the electric current from the coil flows through the fixed igniter to the movable one and by grounding in the engine completes the circuit back to the battery.

But the vertical rod has no sooner pushed one tip against the other than its pressure is relieved by a tripping device. The strong spring on the arm instantly snaps it back to its original position. As the contact in the cylinder is broken, a hot spark wipes from one platinum tip to the other and ignites the explosive charge.

No timer or distributor is required with this type of ignition system because a separate igniter with controlling apparatus is provided for each cylinder. Where a magneto is used for supplying electricity under way, a set of dry cells must still be fitted for starting. A device is provided for tripping the movable igniter earlier or later, and thus the make-and-break spark can be advanced or retarded as in the case of the jump spark system.

(To be continued)

Industrial Marine Engines

There are many demands for sturdy engines for industrial purposes, such as the driving of generators, pumps, and other purposes where constant power is required, and the Red Wing Motor Company, builders of the Thorobred marine engine, have adapted their Big Chief and Big Chief Special engines to this purpose. These engines produce 60 and 90 h.p., and have been fitted with an automatic governor for carburetor control, which prevents them from racing. The bore and stroke of these machines is $5\frac{3}{4}$ by 7 inches, and a pressure feed oil system and double ignition are features of the engines. These industrial type engines are also interesting to boat owners, since they are particularly suitable for heavy boat work, and well adapted to use with the McNab rudder.



The Nautilus, on the right, and the Flamingo, below, are two of Carl G. Fisher's three hotels at Miami Beach, all of which are modern and absolutely fireproof.



Come to MIAMI BEACH in the Winter

THE winter is the time to come to Miami Beach. Come early and stay late. The weather is pleasingly warm, just like a typical northern day in June. The air is perfumed by tropical flowers and animated by the breath of the great Atlantic, tempered by the Gulf Stream.

The broad palm fringed beaches look out upon emerald hued seas, spotted with majestic yachts, snappy cruisers and fast moving high speed runabouts. On the beach, those who are on in years rank equal in spirit with the fun and glee of the young bloods and tots. All your worldly cares are forgotten and once more you are the playful lad or lass you used to be.

If you are a follower of Izaak Walton you could not wish for better fishing grounds than the Florida waters. If golf, polo, tennis, baseball, skating or motoring is your favorite recreation, you will hardly find better facilities for their indulgence. Of course, all of us like to dance. But how many of us have tripped the light fantastic amidst a bower of cocoanut palms?

Mother Earth has not endowed any other spot with such lavishness in natural resources as she has given Miami Beach. No wonder that Miami Beach is the pivot of society's life and gayety during the winter.

Plan particularly to be here during the Annual Southern Regatta in March, 1926, and witness the great boat racing contests for the Fisher-Allison Trophy, Dodge Memorial Trophy, and other prizes.

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American Machine & Foundry Company

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AMF STANDARD

The QUALITY pumps

Julius Caesar Goes to Sea

(Continued from page 45)

covering her, modest-like, along with part of a silk one-piece bathing suit, and the cutest little sandals you ever sees.

In the meantime, the warden, he has dragged Caesar out of his dungeon, given him a safety razor, and told him to shave. Now in all them months Caesar has grown a swell beard, which drags on the floor, it does, and he strokes it, affectionate-like, and says, "I guesses I keeps it this ways." "No you doesn't," orders the warden. "I gets orders to cleans you up, and I cleans you up." Now the warden, who has not heard nothing about the Lost and Found ad, supposes that they is just getting him ready for a clean, respectable execution, so they grabs Caesar, the prison barber, he slops a little lather on his face, and while he yells with pain, they scrapes off'n that beard, a hunk out of his chin, and the lapel of his left ear, with a tool what looks like a putty-knife. Then they dresses him in a clean Toger, delivers him to the guards, and off he goes.

Presently they ushers him into the Thrown Room, and there was Cleopatra looking like a cross between a Miami Bathing Beauty and one of them Ziegfeld girls. He rubs his eyes and doesn't know what it is all about. "Is you Caesar?" asks Cleopatra, soft-like. Now Caesar, he was a cagey feller. He recalls, distinct, that the last time he admits the fact, she throws him into a dungeon, so he thinks fast and says, "No, I is Ptolomy the Third, whitty-like." "Be yourself," rejoins the Queen. "Isn't you the guy what sails in here on the Flotus last November?" He thinks this over awhile. You see, his mind, it was sort of dazed-like, being in a dungeon so long, so he says, cautious, "Just what is the big idea of all this jawfest, your highness?" "Well," says she, "I finds I makes a slight error about your identity, I does, and I finds out that you is really Caesar," and with this she sort of wags her tail, just the ways the daybutants does nowadays. "Cut that out," exclaims Caesar, getting the point all at once. "Nemo me impune lacessit," meaning, "No one gets rough with me and gets away with it." "Well, what you needs is a good meal," says Cleopatra, tactful-like. "I'll say I do," agrees Caesar, and the Queen, who knows all about how to handle men when they is ugly, serves him with a swell feed and after that gives him a shot in the arm, and by the time he wakes up the next day, life, it didn't look so bad to him, it didn't.

However, he was pretty sore and when they meets he starts out to high-hat her, but she looks dumb and simple, just the way they does nowadays when they is trying to pull your leg. When he tells her that he proposes to punish her, the tears they comes to her beautiful eyes, and she says, sobbing, "I only done what I thought right. You doesn't appreciate me." With this, his heart, it softens. He says, "You is not a bad kid; maybe we gets better acquainted," and reaches for her hand. Instantly she changes speed, the way they does, pouts, pulls her hand away, and says, "Don't do that. We hasn't known each other long enough for you to act that ways, and anyways, I think you is a roughneck."

Well, one thing it leads to another until Caesar, he gets cuckoo over her. He gets back the Flotus, has her put in commission and a couple weeks later he says to the Queen, "Cleo, what does you say, we has a little party aboard my yacht all by ourselves?" "Does you thinks that would be proper? You knows how people talks." To make a long story short, he kids her into it by having a old and respectable chaperon along, what goes to sleep every night at eight o'clock, and the next Tuesday finds them floating down the Nile. They was not a ripple on the water and the moon it shines bright. The Queen, she reclines on a tiger skin and Caesar, he sits at her feet; he has a gittar in his hands, and looking up into her dangerous eyes, makes it go blink, blink, blink—blink, blink, blink, and sings.

*I know a young woman of Cairo,
Tra la,*

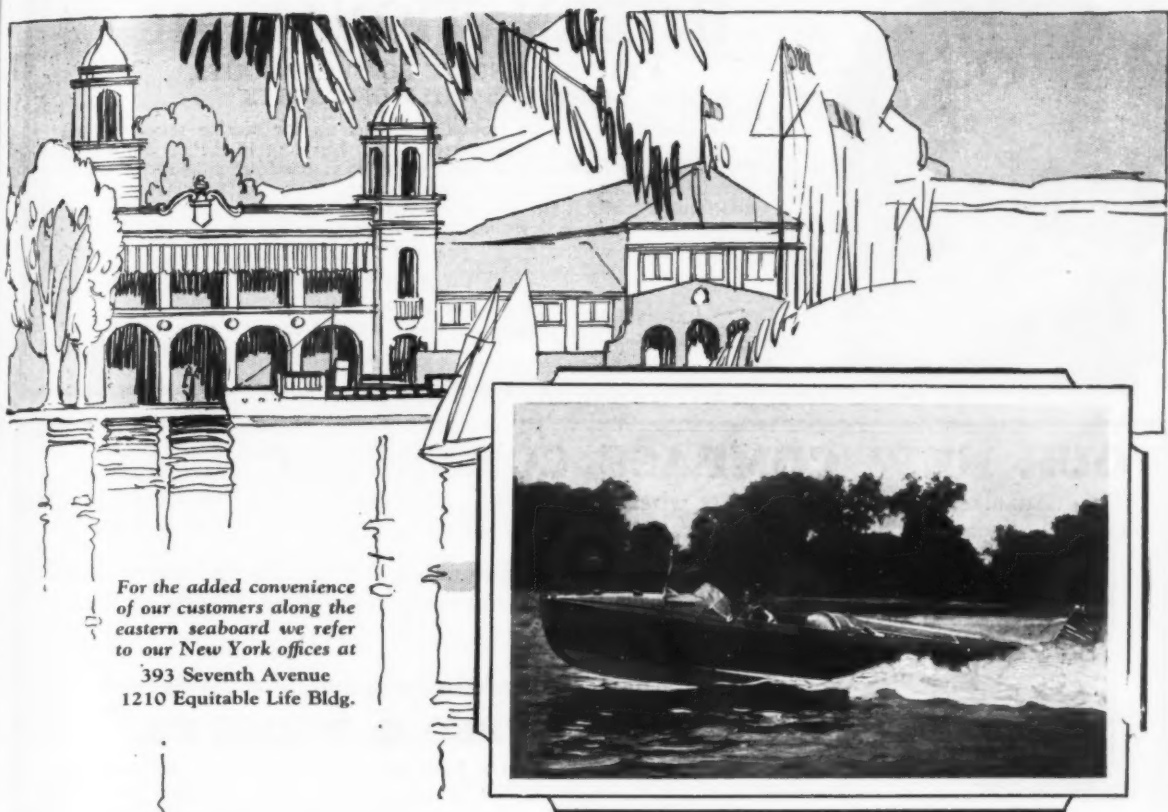
*What ain't no commonplace tyro,
Tra la,*

*Though she throws you in jail
And makes you quite frail,
You falls for her, strong, you does.*

*Her lips they is red as the poppy,
And in dress, she never is sloppy,
Smooth as to skin and lean in the shin,
I learns about women from her, I does.*

*My kingdoms, they ain't such hot stuff,
If but she will love me enough.
Although I may miss,
I shall try for a kiss.
Tra la, tra lo, tra la.*

(Continued on page 84)



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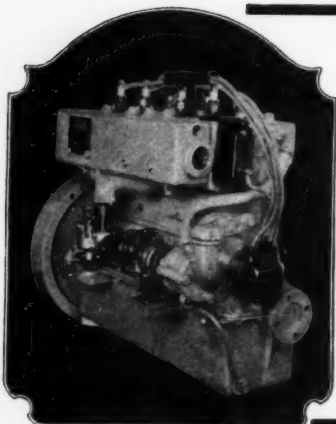
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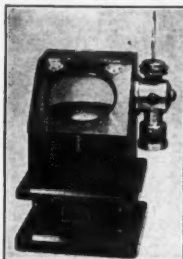
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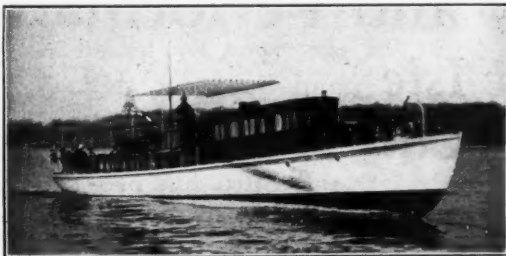
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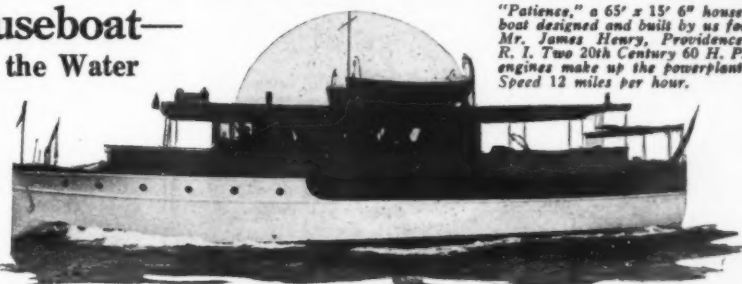
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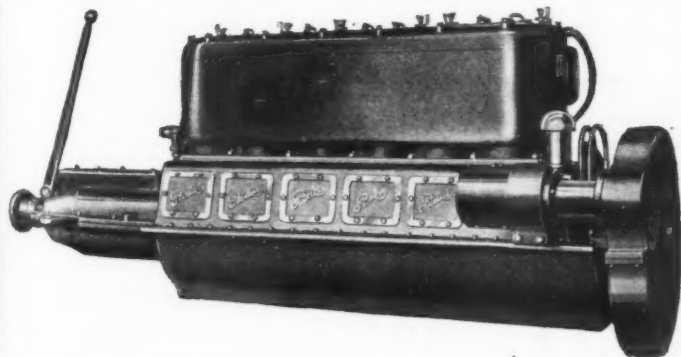
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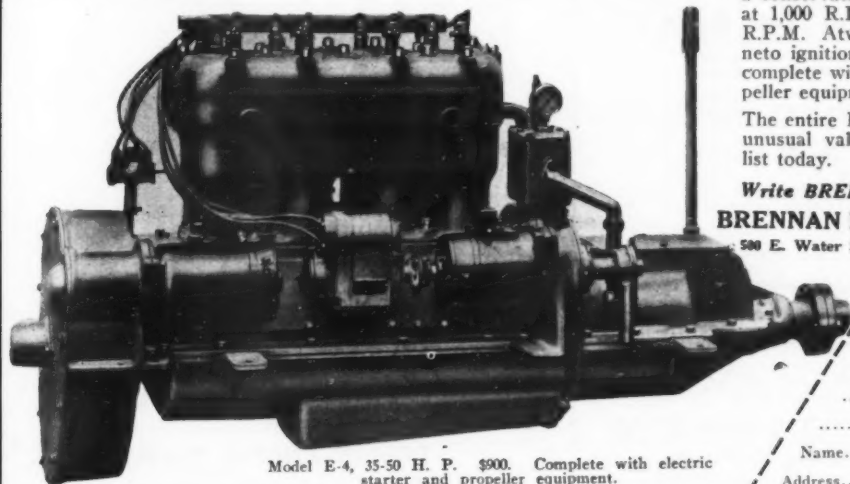
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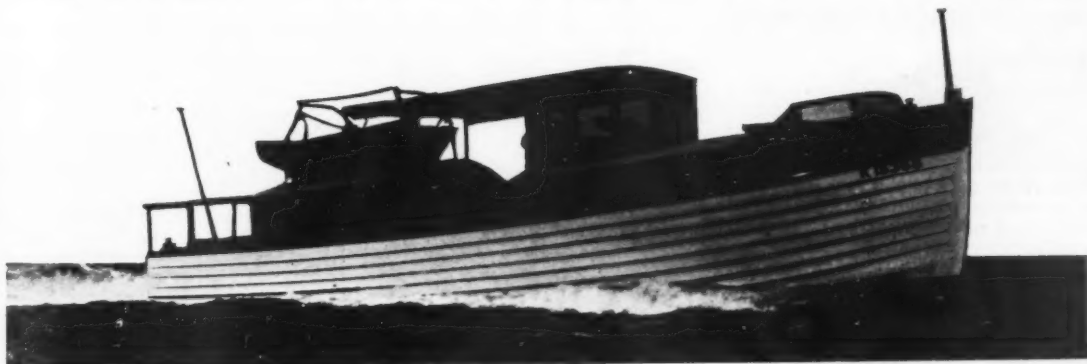
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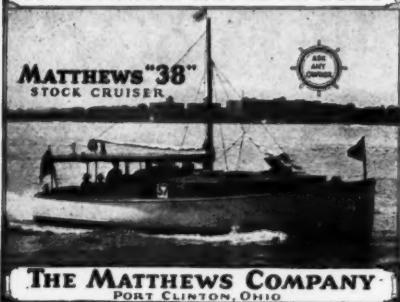
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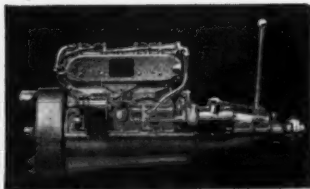
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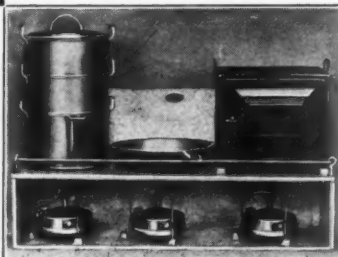
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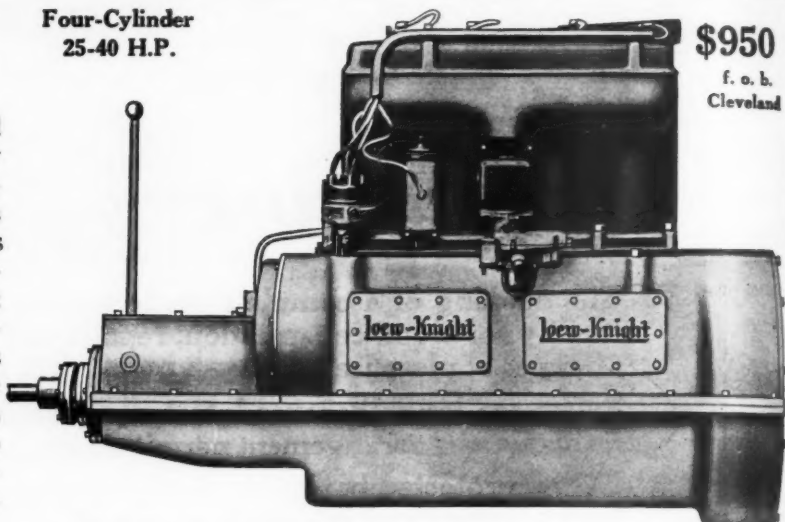
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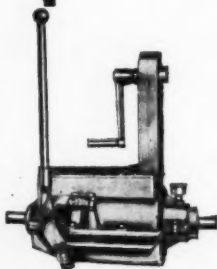
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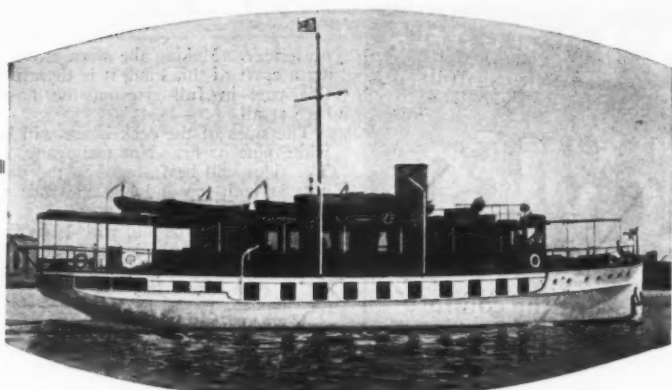
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(Continued from page 47)

preferable. Making the stern is the most difficult part of building a craft of this kind, it is therefore doubly necessary to draw this part in full size on the floor; guesswork will not do here at all.

The sides of the deck house will be made of 1½-inch cypress, white pine or fir. Not mahogany. Coamings of like material. The sides will be fastened to the deck with ¾-inch rod, having nuts at both top and bottom; rods will be set on about 18-inch intervals.

The deck will be laid with ¾ by 2-inch edge grain fir or white pine, using galvanized iron screws for fastenings. The heads will be countersunk and plugged with deck plugs. One fastening to each beam, but staggered both on the beams and along the planks. The seams will be caulked and payed, then puttied with Kuhl's black seam composition. There will be a plank sheer around deck edge made of ¾ by 5-inch white oak and under this ¾ by 2-inch doubling to form rabbet for ends of deck planks.

The planking will be 1½-inch white cedar or yellow pine laid in at least 18 strokes to each side. The fastenings will be dipped galvanized iron boat nails, just long enough to clinch over inside. The backs of all planks must be sufficiently hollowed so as to permit a snug fit to the frames for the entire width of the planks. Wherever butt blocks are needed, these will be made of white oak. The width to be at least 1 inch wider than the plank. Also keep the thickness of butt blocks at ¾ inch, so as to permit ventilation from the bilge to the clamp after the ceiling has all been laid. All fastenings are to be counterbored for and the heads covered with cedar boat plugs. Planking to be caulked with cotton, payed and puttied with white lead and putty mixed half and half.

The carlins for the cabin top will be made of 1½ by 2-inch yellow pine and set on 10-inch centers. These will be mortised into the house sides and fastened with long galvanized iron screws. The top will be covered with ½-inch tongue and groove fir or pine and covered with 10-ounce duck. The latter to be laid in Jeffery's liquid marine glue. The duck will turn down over the sides and be covered with 1½-inch half round oak moulding.

The cockpit well will be made of ¾-inch cypress and hung from the deck on ¾-inch galvanized rods, as shown. The bottom will be laid athwartship and will also be made of ¾-inch stuff. Floor to be covered with 10-ounce duck set in marine glue. There will be at least three rods on each side and one each end. Two drains will be fitted each side aft, made of 1½-inch lead pipe, as shown.

There will be a low rail around the deck made of 1½ by 2-inch white oak. This should be set on edge and about ¾ inch inside the deck edge. Fastenings long galvanized iron wood screws.

The rudder will be made with 2-inch diameter bronze tubular post, having wall about ¼ inch thick. The blade to be made of 1¾-inch yellow pine. All riveted to the post with ½-inch diameter brass rods. The foot of the blade will be fitted with similar tube as shown. The rudder well will be made of bronze tube having inside diameter of 2½ inches. The lower end of tube should be threaded and screwed into the horn timber, then pinned to prevent its turning around. The port for the propeller will be cut from both the rudder and the stern post, making this large enough to clear a 16-inch diameter Hyde propeller. Rather than the regular bronze stuffing box, I should use a lignum vitae bearing, as shown. Then place the stuffing box inside. After propeller shaft is in place, the alley should be filled with melted paraffine. It will never leak here then.

(Continued on page 84)

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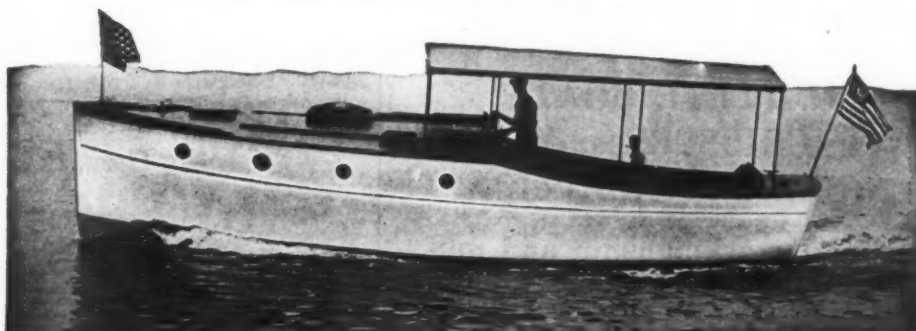
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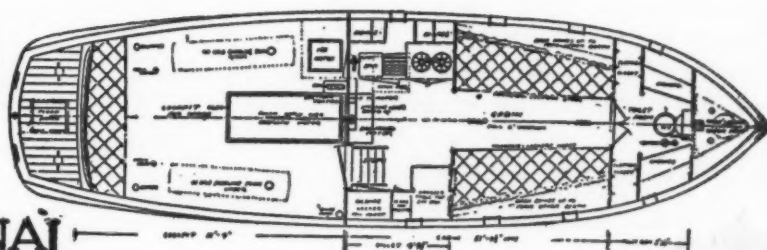
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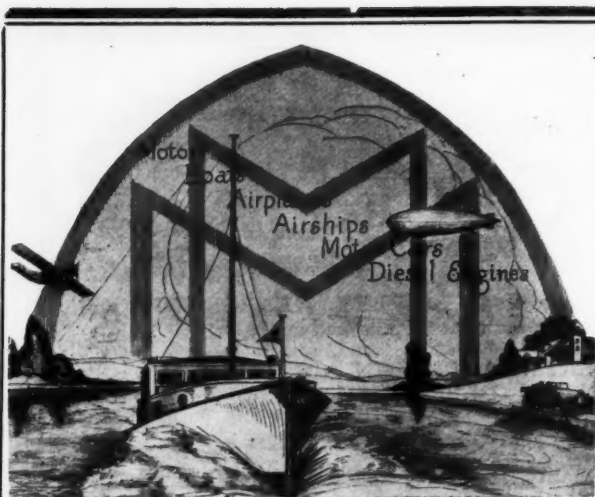
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F. W. Von Meister

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253 West 57th Street

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Circle 3935

Elf—A 31-Foot Auxiliary Sloop

(Continued from page 82)

Companion slides, hatches, coamings for these, hand rails, etc., will be made of white oak and varnished at least five coats spar varnish.

Notice that the cabin flooring is laid on a slight curve. This gives full 6 feet headroom under the entire length of the cabin house. The floor beams will be made of 1½ by 2-inch yellow pine and spaced on 12-inch centers or thereabouts. Flooring should be ¾ by 5-inch pine or fir, with square edge, and screwed down. Leave two widths of flooring loose for inspection of bilge. Another thing: bore holes at after end and fore end of flooring for ventilation. Or better than this, fit a small wooden grating at either end of the flooring.

The cabin interior will be finished in cypress or pine and painted. All partitions, locker fronts, doors, etc., will be made also of ¾-inch stuff. I should paint the whole thing inside for my own use. And it would be some other color than white, for white is very tiring to the eyes. There are several shades of tans and stone greens which would make a very home-like looking cabin.

It will be noted that the cabin is laid out to sleep four. I have arranged several boats in this manner and the plan works out well. There is ample locker room, ice box, handy sink and dish lockers, room for a No. 1 Shipmate range, toilet and all that sort of thing. I suppose some owners would want a separate toilet room, but this takes up so much space that it has seemed well enough to tuck the w. c. away under the seat between the forward bunks. A light curtain can easily be hung between the icebox and the hanging locker, giving privacy to the forward bunks.

I should use a motor of the Universal-Redwing Baby Doll-Niagara type, developing about 9 to 12 h.p. at 1,000 r.p.m. One of this kind fitted with reverse gear and electric starter is the ideal power unit for a small auxiliary of this kind. The propeller can be of small diameter, 14 inches, with 10-inch pitch, and thus causing a minimum of drag while the boat is under sail.

The masts and spars will be made of either spruce or fir and exactly to the dimensions given. Standing rigging will all be galvanized steel. The sails should be made of Wamsutta duck, the mainsail being 10 oz., the fore staysail the same, and the jib 8 oz. Sails to be crosscut with cloths about 20 inches wide. In a boat of this character the blocks should be of the best make, like Merrimans, and have patent sheaves. It is always well to have blocks too big. The total sail area is 593 square feet, enough for cruising and long distance racing. Under power the speed will be in the neighborhood of 6 miles an hour. I should not use more power than that of the motors specified.

The anchors for a boat of this kind should weigh 50 lbs. with 5/16-inch chain for the larger and 26 lbs. with ¼-inch chain for the smaller. And there should be at least 40 fathoms of chain for each anchor.

As a service to readers who wish to build this boat, and might want larger copies of these drawings to a scale of ¼ inch to the foot, arrangements have been made to supply blue prints at moderate cost. Write to the Editor of MOTOR BOATING, 119 West 40th Street, New York, N. Y., for particulars of cost, and how to secure prints.

Julius Caesar Goes to Sea

(Continued from page 72)

Now they is no woman what can resist attentions like them. Cleopatra she sighs. Caesar, he seizes her; their lips they meets, and a pleasant time, it was had by all.

These necking parties, they goes on for some time, until finally a check with which he has bought her a ten-horsepower chariot, it comes back from his bank in Rome stamped "Insufficient Funds." With this he gets exceeding wroth, he does; in fact, he gets so mad that he tells Cleo good-bye for a few weeks, jumps onto a wild ass and makes all speed back to the office.

When he reaches Rome, nobody pays no attention to him. The guards, they refuses to let him in the palace until he tips them two bits each, and when he gets to his room, what should he find but Brutus, Cassius, Octavius and all the rest of the old gang playing poker, throwing cigarette butts all over his swell furniture and drinking his own lick and everything. In a rage, he yells, "Varlets, what does you mean by such impertinence? You would desecrate your emperor's privacy, would you?" "Oh, go tell it to the Senate," says Cassius, sour like, trying to satisfy his lean and hungry appetite by stuffing a sandwich into his mouth. "You loses your job, you does, feller, by staying away so long." Well they was all pretty badly crocked; one word, it led to another, and after awhile, Brutus, he pulls out a knife, up and stabs him, and that, it was the last of Caesar.

Now the moral of this story, it is that even if you is so smart that you gets a corner on the whole map beforehand, that if you goes running around with these wild women, somebody, they is sure to get your shirt.



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Famous English Aviator and Sportsman

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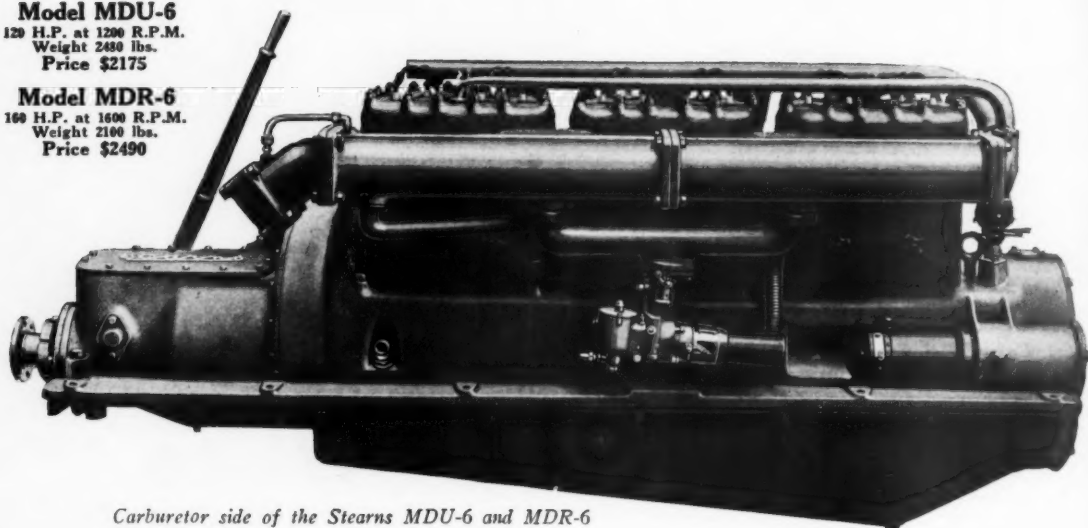
Note the graceful lines of the Baby Gar when at rest in the water.

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Model MDU-6
120 H.P. at 1200 R.P.M.
Weight 2400 lbs.
Price \$2175

Model MDR-6
160 H.P. at 1600 R.P.M.
Weight 2100 lbs.
Price \$2490



Carburetor side of the Stearns MDU-6 and MDR-6

THE new Stearns Six is an engine of $5\frac{1}{8}$ " bore and $6\frac{1}{2}$ " stroke, furnished in two models for medium speed and high speed service. It embodies all the latest developments of accepted marine engineering practice, a brand new design in every feature but conforming to tried and proven principles of high grade engine construction. Refinements and improvements are found in each and every detail.

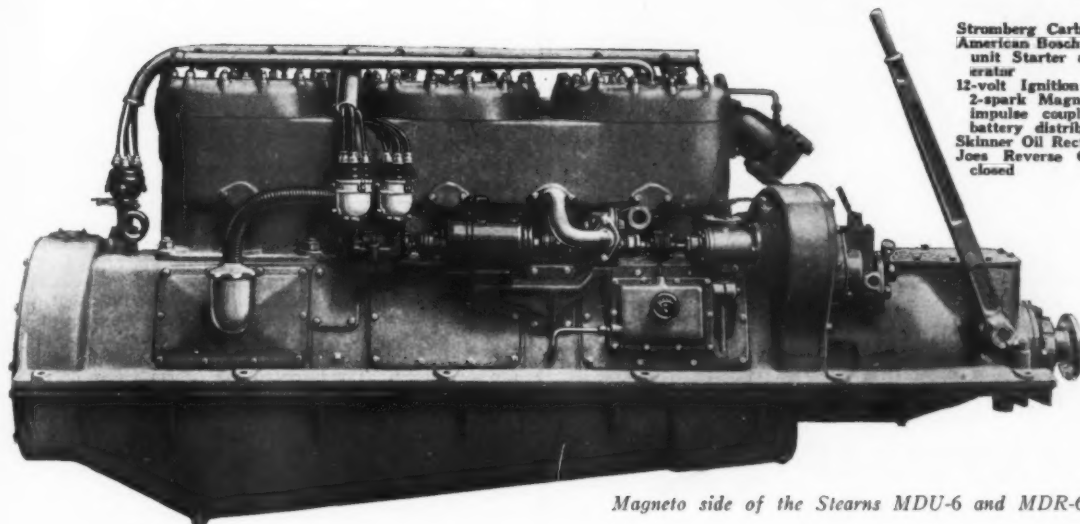
This is the engine for large cruisers, houseboats and commercial boats, for express cruisers and extra large runabouts. It is built to operate continuously under full load, and has the strength and stamina in all vital parts to withstand many seasons of hard service with a minimum of attention and expense.

The flywheel is on the forward end of the motor and is completely enclosed. Accessibility is a notable feature of this engine.



One of the first installations of the new Stearns Six is in Joebill II, a 46' x 12' x 3' cruiser owned by Mr. R. J. Perrine, Brooklyn, N. Y. Speed is 12 miles an hour and Mr. Perrine is well pleased with the new engine, having used a four cylinder Stearns in his last boat.

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Magneto side of the Stearns MDU-6 and MDR-6

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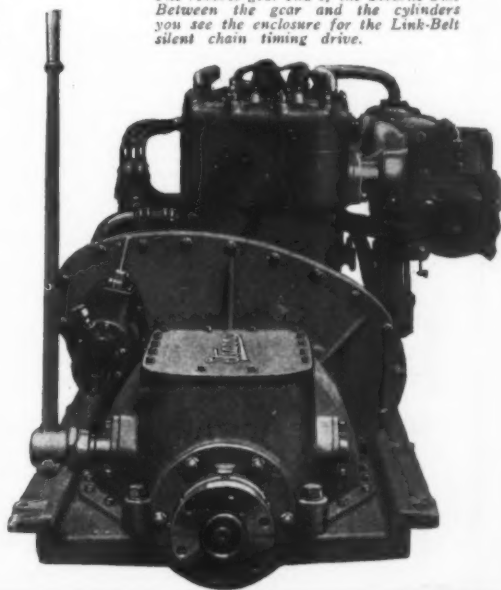
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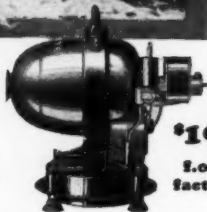
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*The reverse gear end of the Stearns Six.
Between the gear and the cylinders
you see the enclosure for the Link-Belt
silent chain timing drive.*



Pattie II, a 40 foot express cruiser, owned by R. E. Patterson Esq., Middletown, Conn.



PATTIE II

A fast moving 40 footer that is HOMELITE equipped

HOMELITE, the only really compact electric light and power plant, may be installed on any type of marine craft without the sacrifice of valuable space. This wonderful little 600-watt plant turns out plenty of current to meet all your requirements,—sailing, riding and cabin lights, electrical appliances and machinery up to $\frac{1}{2}$ hp.

HOMELITE can be absolutely depended upon under any and all conditions. It may be used without batteries or in connection with the boat's batteries and it operates on any cheap fuel.

Dependability, compactness and small expense,—these are the reasons why boat-builders, designers and dealers are making HOMELITE standard equipment,—these are the basic reasons why hundreds of prominent boat owners are installing HOMELITE.



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Over all dimensions: Length 21", width 14", height 21".

Weight: 110 pounds. Ball Bearing throughout.

Engine: Single cylinder, two-stroke air-cooled. Carburetor, specially designed, adjustable to various types of fuel. Ignition, high tension Bosch Magnetor Bosch Battery Ignition.

Generator: Six pole, shunt wound. Output, 600 watts minimum, d.c.

Current Control: Specially designed voltage regulator.

Voltages: 12, 32 and 110 volt models.

Operates: Without batteries, it will light 40 lights continuously, or appliances such as toasters, grills, electric fans and irons, etc., or machinery up to $\frac{1}{2}$ hp.

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Cruising with Radio

(Continued from page 37)

there was one more member in the person of Captain LeRoy Slate, a Nova Scotian, and a deep water sailor. He rather turned up his nose at the thought of a fresh water cruise, but before he came home he had changed his tune.

The cruise was to officially start from Nyack, but due to a breakdown of the self-starter motor it was necessary to delay for nearly two days. Anchored off the Nyack Boat Club, Spendthrift II laid crossways to the tide and wind and some of the crew lost their appetites in short order. Cap also lost his head on account of the great quantities of oil which came out from the gas works and covered the snowy white sides of the ship.

Had it not been for the radio set during these two days, the cruise might have disintegrated into a sleeping match or possibly into a free-for-all, fight for things were most certainly not cheerful. At every opportunity the receiver was put into operation and the concerts from the New York stations were enjoyed to their fullest extent. Why is it that any kind of music always sounds so good when it comes over the water?

Finally we received the new starting motor and inside of half an hour were headed up river toward Croton Point, where we planned to anchor for the night behind the point on the northern side. This is one of the most sheltered covers along the Hudson and with plenty of water under the keel we turned in to the accompaniment of a heavy thunderstorm. For once the radio set could not be used.

At 4:45 the following morning ye scribe awoke to find the wind whistling through the rigging, and after a brief conference with Cap it was decided that the rest of the crew must be rolled out and the ship headed northward again. Haverstraw Bay has the reputation of being a bad sheet of water in a blow and we wanted to get away before things began to happen.

Amid much grumbling everyone was finally on deck and within ten minutes the good ship Spendthrift II was heading northward into the rising seas, headed directly for Stony Point Light. Passing through the Highlands of the Hudson, we had the experience of seeing the sun rise and tint the peaks of the mountains a delicate pink. Bear Mountain Bridge was passed in a blaze of rising glory and it was not long afterward that we hove to off the float of the Newburgh Yacht Club in quest of ice.

A small boy informed us that the steward had gone to New York for the day and advised that we move on some seventeen miles to the Poughkeepsie Yacht Club, where our needs would be fulfilled.

In a little over an hour and a half we tied up at this club float and waited some forty minutes while the steward was busy filling the tanks of a large mahogany cruiser. We finally secured the ice and proceeded on northward and after passing Esopus Island, for the first time referred to the charts. From this point all the way to Port Henry on Lake Champlain it is necessary to have good charts and to steer by compass courses. The upper Hudson is full of shoal spots and one has to be careful not to get hung up in the middle of the river.

On past Esopus Light, Kingston and all the other towns which dot the shores of the river, to a point in back of Coxsackie Island, a short distance above the town of that name and only a few miles below Albany. In back of this island we found a perfect harbor for the night in still water and without a sound. Needless to say, the radio set again came into play and we enjoyed the strains of the New York Philharmonic Orchestra. So good was the music that attempts on the part of ye scribe to tune in some other stations were met with loud threats on the part of the assembled crew.

After a night of unbroken sleep the ship was under way at six in the morning and soon afterward arrived in Albany, where the necessary pass for the Champlain Canal was received from the Commissioner of Canals on Lancaster Street, a short distance from the capitol. These canals throughout the state are absolutely free, but a box of good cigars helps matters considerably when it comes to locking through.

After taking on supplies at the Albany Yacht Club we again headed up river and were soon in front of the first lock at Troy. These new locks are not the same as those of the old canals and are well worth a visit by a yachtsman. They are huge concrete affairs, capable of raising a whole fleet of motor boats, but it just so happened that this first lock was to be our worst experience.

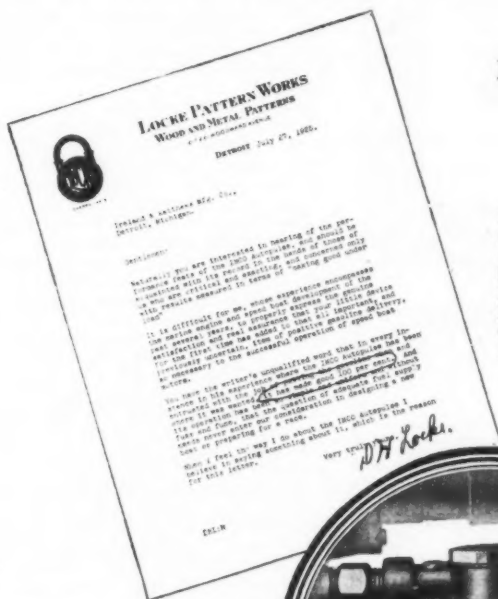
Immediately in front of us in the lock was one of the huge motor-driven barges of the Standard Oil Company and when the lock was filled and she started ahead, the wash of her propeller all but terminated the cruise right then and there.

Had we not taken the precaution to have special fenders made for the ship, Spendthrift II would have emerged from that lock looking more like a total wreck than anything else we can think of. These fenders, for your information, were made up of eight-foot lengths of two-by-fours, padded out with excelsior and

(Continued on page 90)

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ATLANTIC SUPPLY CO.

ATLANTIC HIGHLANDS, N. J.

Cruising with Radio

(Continued from page 88)

covered with unpainted canvas. Two were secured on each side of the hull and with the usual array of small fenders we passed through a total of some twenty-four locks without so much as a scratch.

We soon outdistanced the barge after leaving this lock and proceeded on through the well-buoyed channel of the upper Hudson River until we reached lock number three. At this point a huge dam impounds the waters of the river above the lock and the flow of this water passes directly across the channel in front of the lock entrance. This is white water and is extremely dangerous to a low-powered boat. Unless care is exercised even a powerful cruiser will find itself crushed up against the concrete piers lining the eastern bank of the river. This point is easily the worst encountered on the whole trip.

Finally, after passing through some six locks, we take a side branch of the river at Fort Edward and find a snug harbor for the night. Here the ship rides without motion, and again a radio concert is enjoyed. Strange as it may seem, only one New York station comes through with sufficient volume for the loud speaker. This is WGBS. The others are lacking and finally WGY in Schenectady is tuned in and a really excellent program is heard. Attempts, so far, to operate the set with the engine running have proven unsuccessful, and even the little generator engine provides enough artificial static to completely blot out the broadcasters. However, the evening is the best time anyway, so we are content to let it go at that.

The following morning we enter the remaining locks and are soon at Whitehall at the lower end of Lake Champlain. There are twelve locks in all, each of which is manned by courteous attendants and the canal itself winds through a beautiful rolling country.

We lock into the lake about noon and soon afterward are racing at full speed through the narrow channels of the lower part. These channels are marked clearly with buoys and with a little common sense no difficulty should be experienced. On up the lake past old Fort Ticonderoga, Crown Point and finally to a quiet anchorage in back of the breakwater at Port Henry.

Here the crew leaves for further supplies and a visit to a camp at Brant Lake in the Adirondacks. For a whole day Spendthrift II lies at anchor in this harbor, but with the return of the visiting members late in the afternoon it is decided to again head northward. At this point the lake begins to broaden out with increased depths of water. For a boat drawing three feet of water navigation is possible almost anywhere. However, the charts should be handy in order to avoid some of the shoal spots occasioned by the outflow of some river or creek.

All the way from below Fort Ti, the tremendous bulk of the Adirondack Mountains has been visible over the port bow. As we progress further up the lake, the Green Mountains on the Vermont side also make their appearance and we are sailing amid the most beautiful scenery.

Resuming our course again, we pass Barber's Point soon after leaving Port Henry. This point is one of the show places of the lake and many beautiful summer homes dot the rugged shore line. One can pass quite close to these cliffs because of the great depth of water which is frequently in excess of one hundred feet less than twenty-five feet off shore.

The crew has decided that Westport would make a good place to anchor for the night, but after circling around the bay it is apparent that as we are in strange waters we would prefer a more sheltered anchorage. Again northward therefore out toward the bold headlands of the New York side. About a mile and a half beyond we come to Hunter Bay, an exquisite land-locked harbor protected on all sides by towering cliffs. In this harbor Spendthrift II lies at anchor in about thirty feet of water with the stern within fifteen feet of the cliff.

After a hearty meal in which the chef out-does himself, the radio set is brought up on the companion hatch and the most enjoyable concert of the whole cruise is heard. KDKA in Pittsburgh with the Westinghouse Band and WGY with an excellent program retransmitted from WJZ in New York. Several other stations are heard, but the New York broadcasters are evidently behind some barrier for we cannot hear them. We are, though, receiving some of the finest music in the world and with a full moon rising from the eastern mountains, we venture that no radio concert has ever been received in a more artistic and romantic setting.

However, all things have their ending, and with the advent of ten-thirty stifled yawns are heard and soon afterward the entire crew is rolled in for the night.

The following morning we are again up early and after a swim in the icy waters, we head north and around Split Rock Point where the waters reach a depth of nearly four hundred feet. The scenery at this point is easily the most beautiful of the whole trip.

(Continued on page 96)

BLISS

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Complete with electric starter*

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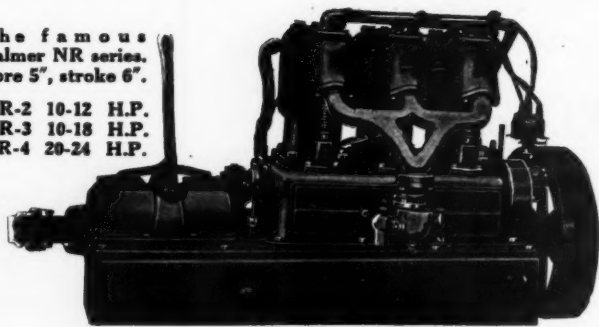
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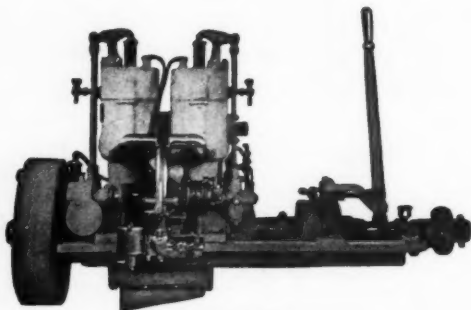
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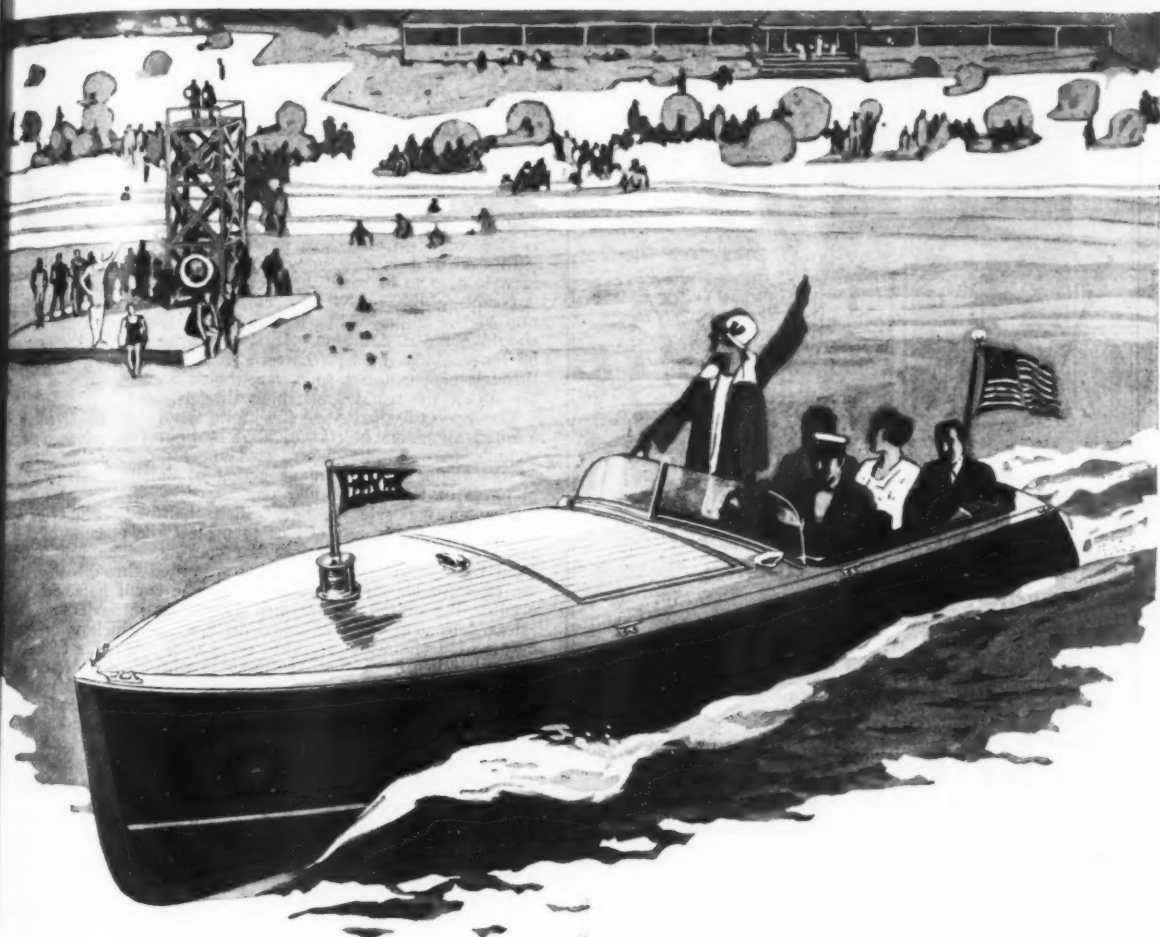
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Starts at the Touch of a Button

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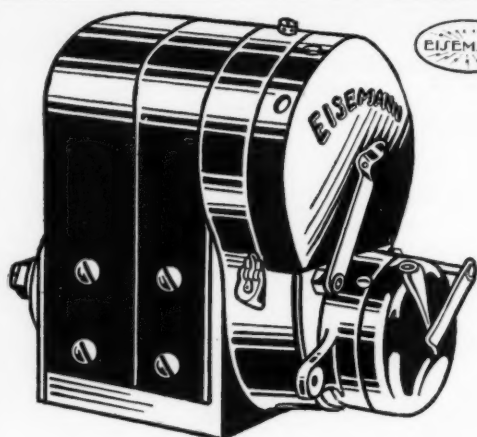
You've seen many a day ruined, many a disposition "shot", by stubborn motors that wouldn't turn. A wheeze and a sputter was all the "outing" you got.

Step on the Watercar's powerful starter and away she goes! No doubt, no hesitation, from beginning to end of the trip.

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WRITE FOR CATALOGUE AND PRICES

DISAPPEARING PROPELLER BOAT CO.
Box 297, Penn Yan, N. Y.

Yard and Shop

(Continued from page 65)

Fuel Oil Adapter

An ingenious device manufactured by Knox Motors of Springfield, Mass., is the Knox Spraymeter, an attachment for gasoline engines of the most general type, enabling them to run on light fuel oil instead of gasoline, thereby producing approximately the same results in power at a saving of at least one-half in the cost of fuel. Its introduction into the marine and industrial field is therefore of tremendous importance.

In design it is extremely simple and so complete and light in weight as to be easily handled and quickly attached. It does not require the removal of carburetor or prevent the operation of the engine with gasoline at any time when convenient should make it desirable. It is so placed on the engine as to be conveniently driven from one of the gears and is connected through copper tubes to a spark plug shell of special design but fitting the usual spark plug threads.

The operating parts of the Spraymeter are so arranged in a small aluminum box as to allow a light fuel oil such as the common furnace oil to be injected into the combustion chamber of the engine by the unique action of small hammers on the plungers of a multi-cylinder pump.

The spray nozzle through which the fluid is injected into the cylinder is so designed as to protect the opening by a ball and stem-spring held against the opening. The ball is lifted from the opening by the force, transmitted through the oil, of the effective blow on the plungers. The small hammers which produce this action are operated by springs in moderate tension released by trip cams mounted on a shaft which is driven by means of a chain and sprocket or gearing from the engine.

Air is taken in through the intake manifold, the throttle being connected with the Spraymeter control. The ordinary throttle lever regulates the quantity of fuel injected at each stroke. The regulation of the fuel introduced in the cylinders is extremely fine and the quantity of air is varied in proportion. The vaporization of the fuel within the cylinders is remarkably complete due to the action of the oil in lifting the spring-held spherical surface at the nozzle opening.

For starting the engine when cold a small quantity of gasoline is used through the carburetor. Vaporization being within the combustion chambers, a less quantity of cooling water is required with consequent less waste of fuel; more of its heat units being converted into power.

Not only is there a considerable saving in the cost of fuel but the following factors also react favorably in the use of furnace oil by means of the Spraymeter as compared with the ordinary use of gasoline.

There is a noticeable smoothness of operation in the engine running on oil, the action approximating that of a constant pressure engine, probably because of the slightly slower flame propagation. With the usual compression of ordinary gasoline engines, there appears to be complete absence of detonation.

The exhaust of the engine being operated from the Spraymeter is noticeably free from disagreeable odor and the irritating effect on the eyes and nostrils that frequently comes from engines running on gasoline, especially when slightly out of adjustment.

Oil dilution is slightly reduced as compared with gasoline. Maximum power derived is in some cases somewhat less than from the same engine running on gasoline. Carbonization of the combustion chamber surfaces appears to be no more rapid than with the use of gasoline.

Cost of fuel in most sections of the United States is less than one-half that of gasoline and in other countries the disparity is generally greater. The installation of Spraymeters, therefore, on existing engines which permits the use of oil in ordinary gas engines with their comparative lightness and low cost, appears both practical and economical.

Other series adapted to other existing engine types will later be in production.

Engines Service During Regatta

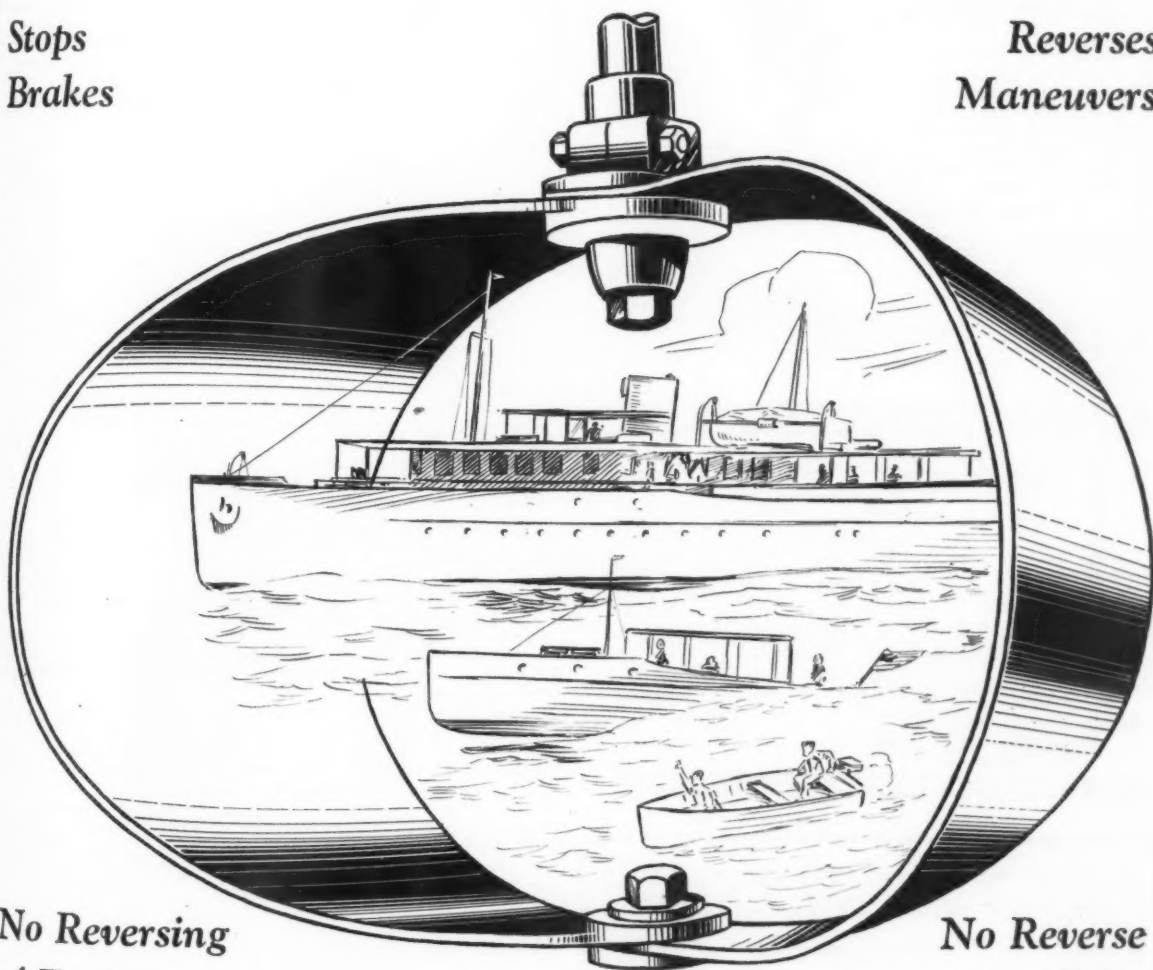
As part of their service to local yachtsmen, it is the plan of Bruns, Kimball & Company, to have their expert mechanics on the job during the period of the New York Gold Cup Regatta, August 28 to 30, at Manhasset Bay. Any service necessary on Sterling or Kermath engines, will be promptly taken care of by looking up their representative in Port Washington. Gus Field will be located at No. 11 Second Avenue, Port Washington, telephone Port Washington 197, and will be prepared to inspect, adjust, or repair any of the above engines. This service is an expression of the firm's good will towards local yachtsmen, and will be furnished gratis.

(Continued on page 128h)

All Modern Boats Maneuver Through *The* McNAB RUDDER

**Stops
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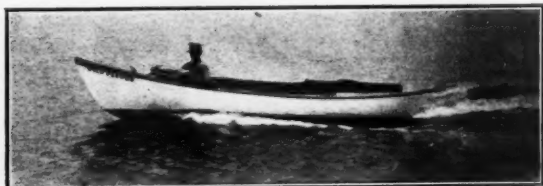
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Cruising with Radio

(Continued from page 90)

by the Vermont, one of the lake passenger steamers plying between Plattsburgh and Ticonderoga.

From Split Rock Point the course is slightly changed to pass near Sloop Island and on toward Juniper Island Light just off Burlington Harbor. At the entrance of the harbor is located Rock Dunder, a lofty pinnacle, without mark or light.

Burlington Harbor is well protected by a breakwater and at the northern end lies the clubhouse of the Champlain Yacht Club. Here we were cordially enough received by a white coated steward who fulfills all of our needs, even to going into the city to secure some provisions we need. In order to relieve the commissary department a little, we decide that dinner shall be eaten ashore for the first time, and in the neat dining room of the yacht club the whole crew adjourns to an excellent meal.

After lunch we again head out and passing Colchester Reef Light in the middle of the lake, head northward past Law Island and on to another excellent anchorage on the northern side of Stave Island. Here the washing is done and the dingy scrubbed of its accumulation of sand and dirt. Mel serves up a piping hot meal and soon afterward the engine is again started and the ship headed out into the lake.

With a perfectly dead calm and a rising moon, we head across the lake in a northwesterly direction toward Cumberland Head Light. When clear of the Crab Island shoals the course is changed to a more westerly direction and soon afterward we are at anchor behind the Plattsburgh breakwater.

It is too late for radio and the tired crew turns in almost at once.

After taking on supplies the following morning the bow is turned south and we skirt the New York shore past the magnificent Hotel Champlain, in back of Valcour Island and Schuyler Island and into the innermost reaches of Willsboro Bay. Here is an excellent anchorage in a safe harbor and the whole crew proceeds to disport itself in the lake much to the enjoyment of the summer bungalow colony. Later on most of this colony is taken out for a sail about the Bay and in return we receive a huge box of home-made chocolate cake and cookies.

We are invited ashore after dinner to attend a dance but the music of the radio and Mel's mandolin keep us on ship-board again under a glowing moon. At six bells all hands turn in to another uninterrupted night's sleep.

After another dip in the lake the following morning, we head south and Cap finding that the water tanks are rather low, we stop in mid-lake to replenish the store. A bucket brigade is formed and soon over one hundred gallons of sparkling lake water is safely stowed below.

The south bound trip is much like the northern course with stops at Crown Point and at Ticonderoga to view the old forts. A night is spent at Whitehall just above the lock where we tie up to an abandoned dredge in a side feeder to the canal. The following day the whole canal is run and we lie at the float of the Albany Yacht Club for the night. Here a dance is in progress but all hands stay aboard and sleep soundly through it all, tooting locomotive whistles and music.

At nine fifteen the following morning we are again headed south in the Hudson River and with two brief stops for swims, we make the home anchorage in front of Haverstraw shortly after six o'clock.

Thus comes to a close a most enjoyable cruise of two weeks' duration. No records were set up and for most of the distance the engine was turning over at considerably below seven hundred revolutions per minute. The radio set has proven its worth and will henceforth become a regular part of the yacht's equipment. No tremendous distances were covered in reception, but what was heard was particularly clear and free from static. Hot weather during the entire trip hindered distant reception, but with the excellent programs from New York, Schenectady and Pittsburgh, no other broadcasters were even sought.

Miss Brown Wins Against Big Odds

(Continued from page 41)

Valley Power Boat Association for competition among the hydroplanes of this class, and must be won three times by the same owner to become his property. After each contest the trophy is to remain in the custody of the winning club until the next contest.

Special interest centered about the challenge from the Ottawa Power Boat Association for the trophy, naming Miss Brown and Teco, as the challenging boats. The Deed of Gift provides that the challenging craft must be named with the challenge, the defenders, on the contrary, have every opportunity to keep the trophy, since they are not required to name the

(Continued on page 112)



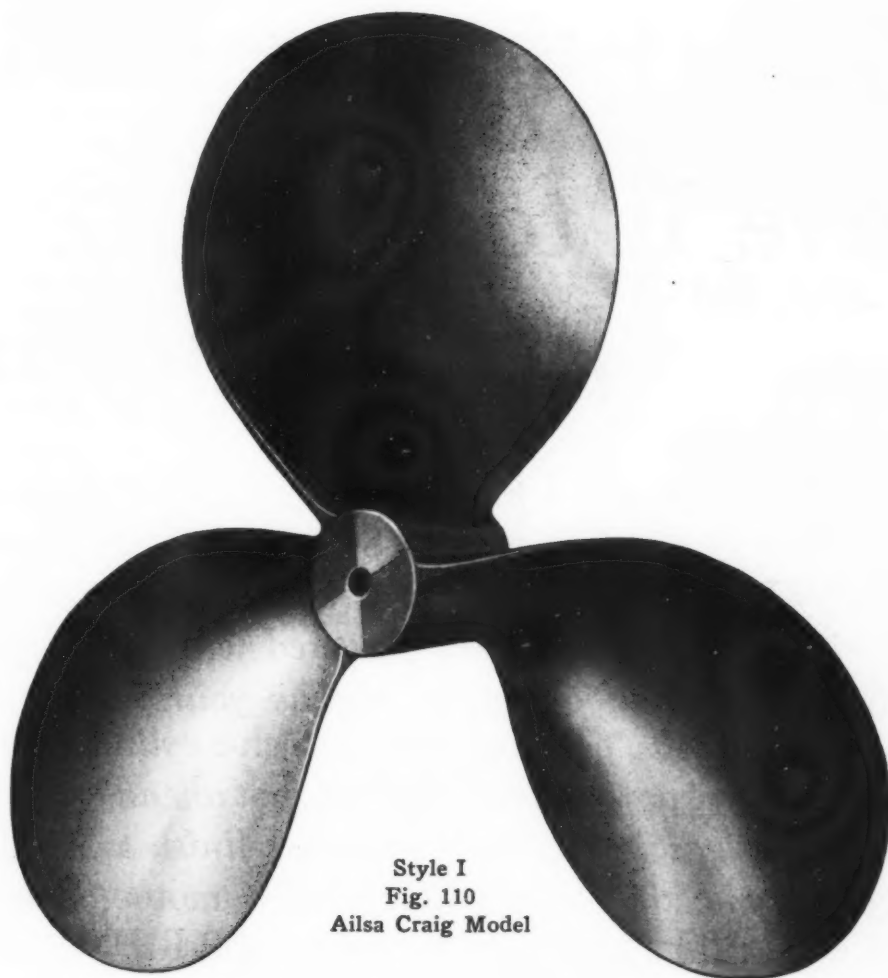
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Races Being Won Every Day

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Eight distinct styles.
The correct propeller for every boat.
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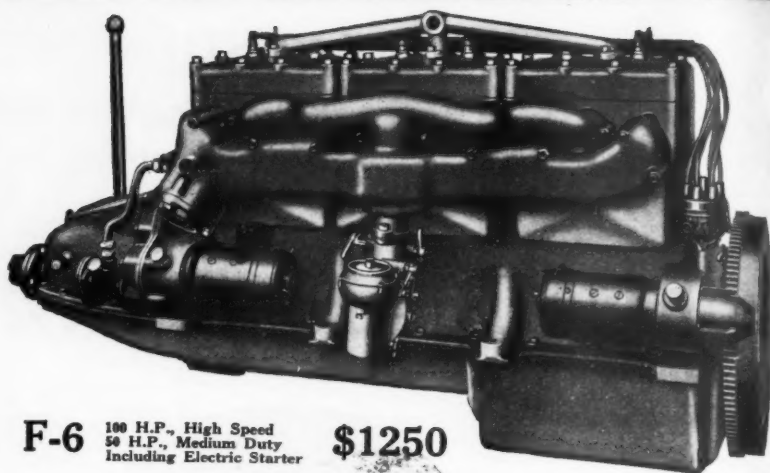
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50 H.P., Medium Duty
Including Electric Starter **\$1250**

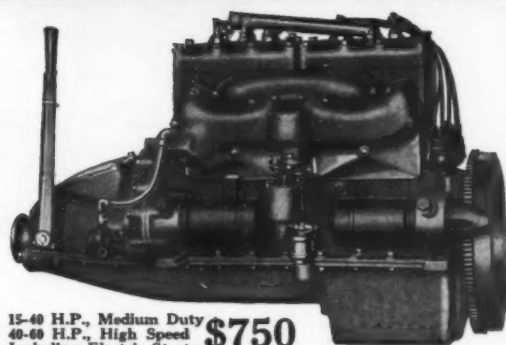
Leave It to Mr. Stoneburg

TWO months ago I purchased a Hacker Dolphin boat powered with one of your SCRIPPS F-6. Last Sunday I entered this boat in a speed boat race at this city against several——powered with eight cylinder aeroplane motors half again as big as yours; also one of——special built jobs, powered with a twelve cylinder Liberty motor. At the start of the race my boat shot ahead of the other boats and kept gaining steadily until the finish when I was nearly a lap ahead. This SCRIPPS F-6 motor is surely a wonder, and will at any time turn up 2200 R.P.M., or over 31 miles an hour and always reliable. I am very pleased with the speed of this boat and have not met a speed boat around here that can pass me." THE N. E. STONEBURG MOTOR CO., Toledo, Ohio.

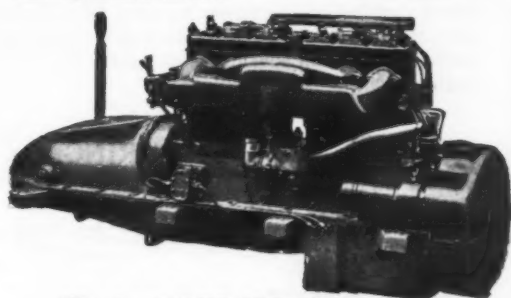
Or if you have had an unsatisfactory experience with other motors, follow Mr. D. A. Cawtha, 230 Cherry St., Grand Rapids: "Am glad to say that I have your F-4 installed in my boat, ordered through Masters, of Walloon Lake. It is the fourth engine I have had in my boat, and the only one that has given me any pleasure or service. I am more than pleased with its performance."

Again we emphasize that SCRIPPS engines win races, not because they are racing machines but durable, reliable power plants that are full of pep and long life. The same mail that brought the above letters also had the following from Engineer Vicent R. De Rosa, Peru 731, Buenos Aires, Argentina: I take this opportunity of advising you of my complete satisfaction at the result obtained with this motor during *eleven years of continuous service* as a means of communication with my islands in the Delta of the Parana and Uruguay rivers, without even the slightest repair, trouble or breakdown. I think the motor should now have a general overhauling, as it has worked long enough without being touched."

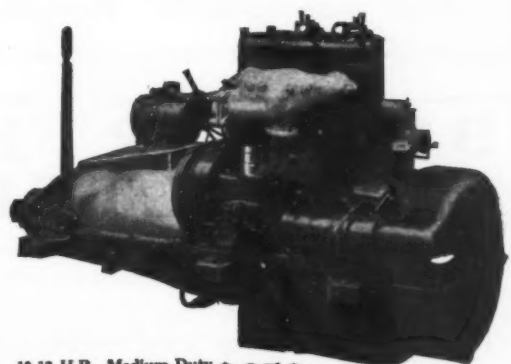
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F-4 15-40 H.P., Medium Duty
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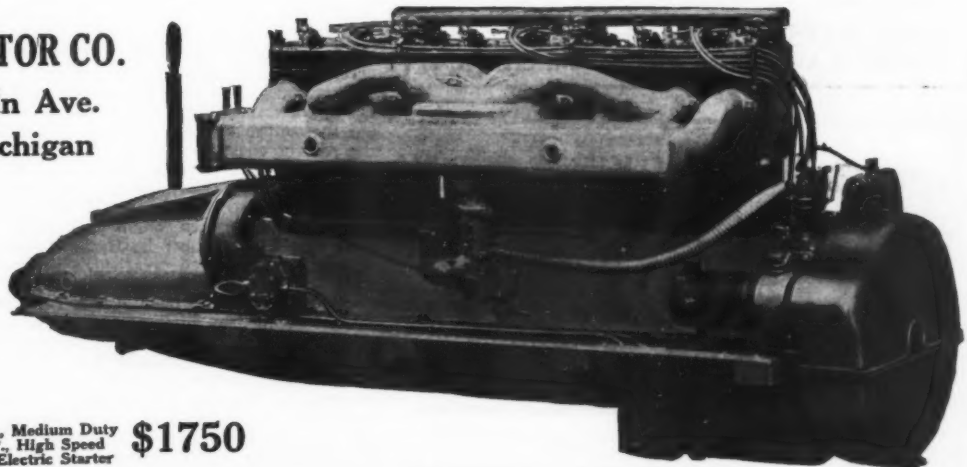
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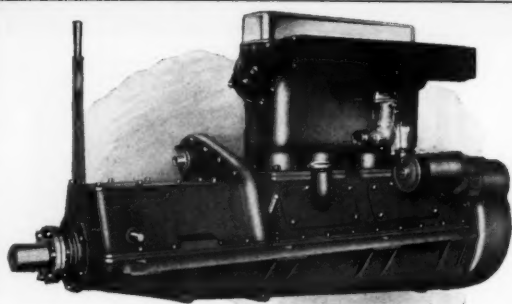
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Big Fish with a Kicker

(Continued from page 23)



Beaver Marine Engine

Before deciding on the power for your boat, particularly 35 ft. cruisers, get the specifications and surprising construction advantages of the Beaver Marine Engine.

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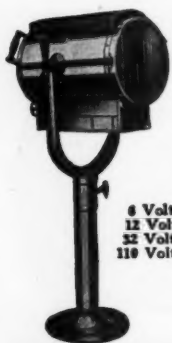
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Arc or Incandescent

Here's a light that floods your course with the brilliance of the sun. Brings out objects as clear as you would see them by day. These searchlights, manufactured of non-corrosive materials, not only make for safety, but also add snap to the appearance of any boat.

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110 Volt Arc or Incandescent Searchlights.

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such which surrender without a struggle so severe that the tyro generally fails at some point in the battle. The best sport for ordinary mortals is that which they get with the fish from eight to fifty pounds in weight. I had almost said thirty, for over that poundage the effort which must be employed to land them is almost indistinguishable from work, as arduous and disagreeable as that of making a new vegetable bed in a frozen garden.

"I think . . . I think I had a nibble just then," said a man who was trolling with me for the first time. That sensation in your rod of something touching the bait is generally seaweed, but sometimes houndfish, a long, narrow fish with a sharp toothed beak, which will turn and twist the bait several times before attempting to swallow it. They will sometimes run behind the boat holding the bait in their jaws. To strike then means simply to twitch the bait out of their impervious beaks. By paying out line, however, until the fish turns and tries to run off with it you may succeed in landing a yard of green and silver, very light for its size, but when you have a strike from a tarpon, or large king fish, barracuda or amber fish, you do not think . . . think you have a nibble. It feels like hooking a subway express, and your preoccupation is to maintain the connection between fish, line, rod, and man at all hazards. The reel will sometimes turn at such speed that it heats up unbearably and must be cooled off in the water when occasion offers. The reel must therefore be good, the line must be linen, and the rod must be strong enough, but the expense of the outfit, good enough for anything but the exceptional monster, which would probably get away anyhow, can be kept down to fifty dollars if the buyer is skillful. The bait knife need not have a buckhorn, the gaff need not have a collapsible handle—indeed, the less collapsible the better; a canvas bag is good enough for spare tackle, a child's baseball bat is the best possible article to quiet a large or reviving fish, and most of the frills of fishing are more bother than they are worth outside the home. When the water slops over the side of the boat and you are wet to the skin and spangled with silver scales down the front of your overalls because you clutched too eagerly your first prize, you will be glad to have the minimum of things to get lost and stepped on in a small boat.

Some people shut off the engine as soon as a fish strikes and play their quarry from a stationary boat, as stationary, that is, as the fish permits, but the engine can be used to great advantage in playing a fish. Skillful handling of the engine means a great deal when there are large sharks or barracuda about which may nip off your ten or twenty-pound fish before you can get it to the boat side. It can be used to tug a grouper away from the rocks to which it will always head when in difficulties and the weariness of feeling the fish sawing slowly through your line against a friendly rock, above the steel wire leader, can be avoided. The engine will help the reel to eat up line which must be retrieved or keep a taut line by running away from an oncoming fish.

A wise hand upon the tiller is not to be despised, though if one must, it is generally possible to do without it. Different fish require different handling, of course, and local conditions seem to demand especial consideration. About Miami they troll very slowly for kingfish, which are very numerous but generally small. A few years ago it was almost impossible to get an outboard motor to go slow enough without being liable to die at any moment, but this has been remedied now. In the Bahamas, across the Gulf, the kingfish are apt to be very much larger and six or eight knots is not too fast to travel for them. Houndfish and barracuda are also generally much larger than in Miami, but the sailfish and tarpon are only found at Bimini and along the Andros coasts. They say the Bahama tarpon do not fight nearly so hard as their brothers in the Gulf Stream and on the west coast of Florida. On the other hand, the Bahamas is one of the few places in the world where the giant barracuda is found: they have been caught up to eight feet long, and a barracuda of that size must be treated with respect. In the Gulf Stream, which may be reached with an outboard motor from either side, anything may be encountered, but the coral patches of the Bahamas, with their incomparable water and sea growths, are not equalled by anything of the kind near Miami. That is a thing apart which delights the true angler as much as the thrill of chase and capture. There is no place in the world quite like the Bahamas for the vagabond angler. With a moderate sized rowboat he can visit dozens of rocks and uninhabited islands from Cat Cay to the long line of islands headed by Eleuthera, and be protected from the open ocean by them most of the way. It is rare to be out of sight of land for more than an hour anywhere. Of course, no one wants to be too far from land in a

(Continued on page 104)

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- Chart No. 7—Block Island to Vineyard Sound and Narragansett Bay
- Chart No. 8—Delaware River and Bay
- Chart No. 9—Chesapeake Bay—Part 1
- Chart No. 10—Maine Coast
- Chart No. 11—Hudson River, Kingston to Albany
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- Chart No. 28—New Jersey Coast, Little Egg Inlet to Bayhead
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- Chart No. 33—Delaware Coast, Cape Henlopen to Chincoteague Inlet
- Chart No. 34—Virginia Coast, Chincoteague Inlet to Cape Charles
- Chart No. 35—Virginia Coast, Cape Henry to Albemarle Sound
- Chart No. 36—Albemarle Sound, North Carolina
- Chart No. 37—Pamlico Sound, North Carolina
- Chart No. 38—North Carolina Coast, Core Sound to New River Inlet
- Chart No. 39—Carolina Coast, From Cape Fear to Winyah Bay
- Chart No. 40—South Carolina Coast—From Winyah Bay to St. Helena Sound
- Chart No. 41—Georgia Coast—From St. Helena to Doboy Sound
- Chart No. 42—Lake Michigan, Southern Part
- Chart No. 43—Lake Michigan, Northern Part
- Chart No. 44—Lakes Michigan and Huron
- Chart No. 45—Lake Huron
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- Chart No. 48—Florida—Cape Canaveral to Miami
- Chart No. 49—Lake Ontario—Western Part
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- Chart No. 51—Nantucket Sound
- Chart No. 52—Long Island Sound, Oyster and Huntington Bays
- Chart No. 53—New York to Boston
- Chart No. 54—Boston to Eastport
- Chart No. 55—Trent Waterway, Ontario
- Chart No. 56—Connecticut River

THE most suitable courses from all principal ports and harbors are given on these charts, as well as magnetic courses and bearings, distances in statute miles, all principal lights, buoys, etc. All charts are drawn to scale. They have proven invaluable to motor boatmen while cruising or planning a cruise.

Much other cruising data is given in the book, such as where to purchase the various government charts and publications, notes on how to use charts, the characteristics of lights and other major aids to navigation, information as to fuel and supply stations, etc.

A number of suggestions for interesting cruises and several complete cruises are outlined as follows:

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- Cruise No. 5—New York to Philadelphia
- Cruise No. 6—Buffalo to Detroit
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- Cruise No. 8—Miami, Florida, to New Orleans
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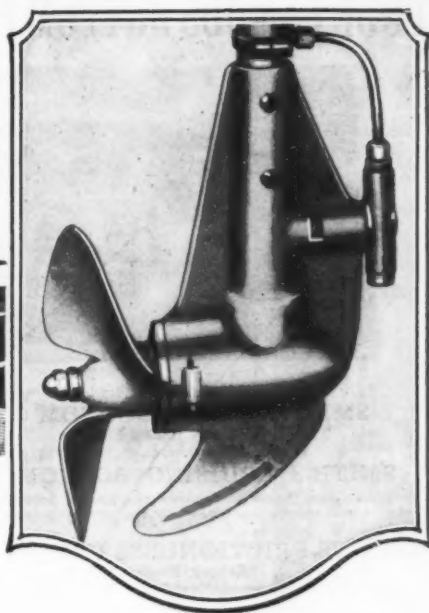
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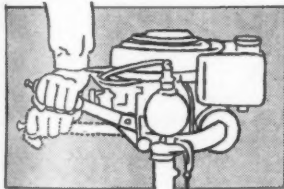
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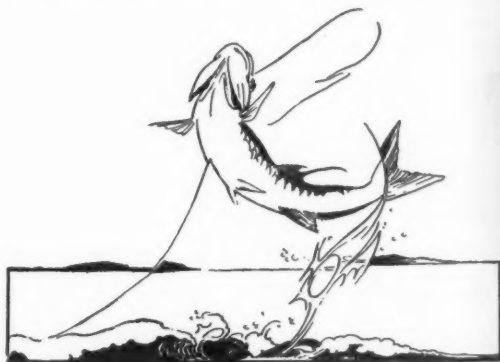
Big Fish with a Kicker

(Continued from page 100)

tiny boat on the smoothest of seas, but where a touring craft can go alone, the man with a small boat with an engine can follow him by the hitch-hike route. He will encounter many a sponger or fisherman willing to hoist him and his craft onto a friendly deck and carry him, for a small consideration, over the long legs of his travels. There he will find a new interest which the big boat owner never touches at all. The possibilities of the little motor have not as yet been exhausted, either for fishing or touring. It is amazing how large and heavy a boat a kicker will propel when put to it. It has widened the possible radius of the man with a small sail-boat and has often brought the sportsman home to an anxious wife at a reasonable hour, when wind and weather conditions might have kept him out in the open air for longer than any but a glutton would care for.

Another sport that is open to those who are not averse to a spice of danger, and can be pursued with a tiny boat, is that of hunting stingaree or devil fish with a harpoon. These fish often lie in shallow water upon the sand and are sometimes of very great size. A stingaree, four or five feet across, if harpooned in such a way as not to cripple his driving wings can tow a small boat at a lively speed for a long way before it is exhausted. The difficulty and danger lies chiefly in that moment when it is necessary to sit down. The fish must be harpooned from the bow and it is advisable to sit down immediately afterwards. Once established in the bottom of the boat there is little danger of an upset, but there have been sportsmen who have watched the sport in four or five feet of water! Contrary to the habit of most large fish when mortally injured, the stingaree does not often make for deep water, but prefers to hug the shore. This in itself minimizes the danger, as an accident in shallow water is seldom a serious affair. The engine in reverse shortens the struggle considerably in case of need.

There are in fact a number of sporting uses for the small boat with a twelve to fifteen foot keel suitable for the out-board engine, and we should like to see the boat builders apply their brilliant art and ingenuity to designing the perfect touring and sporting craft in this class. There must be a vast number of people who never think of the joys of motor-boating on account of its cost, but Woolworth discovered that many small sums can build a fortune as quickly as fewer large ones will do. Here is an almost untouched field.



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The radiogram from the MacMillan Arctic Expedition, reproduced below, reads as follows: "Mullins Steel Boat Company, Salem, Ohio: We are now north of fifty-five and in the ice. We have already had occasion to use the Mullins' boats and they performed in their usual manner. It is a great satisfaction to have them with us. Wooden boats would not stand the ice."

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This message tells its own story. Mullins steel boats were taken to the arctic region by Commander MacMillan on his 1924 expedition and they stood up under the knocking about they got in the ice floes. The MacMillan party used these boats as a cache while in the north, burying them deep in the snow and ice. They were dug up and put into service again during the present expedition, with the result indicated in the radiogram received only a few days ago. No other test could be more convincing as to the strength and seaworthiness of Mullins steel boats.

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You haven't any time to waste on makeshifts or motors of unknown merit.

You know, as does every other experienced boat owner, that in motors the best is the only satisfactory buy in the long run.

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The all around efficient performance of this motor will amaze you.

From the standpoint of dependability, power and economy in price, you will find it the foremost buy on the entire American market.

So make up your mind to have the best motor—right now!

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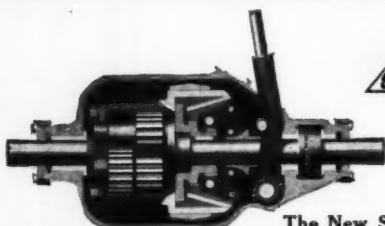
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By Waterways to Gotham

(Continued from page 26)

lowing waves from breaking over the stern, I would still have the alternative of swinging the bow into the eye of the wind and backing to leeward before the storm. Finally, as a last resort, there would be my improvised sea-anchor, which, if it worked, would leave me two hands free to devote to the several little duties that would doubtless be crying for attention. The plan seemed entirely feasible, and—barring another uncovered reef and given a clear beach for the final run through the surf to a landing—I felt confident of carrying it through successfully. Renewed assurance came with the heave of the oars. There is nothing like rowing to steady the fluttering ends of fraying nerves.

Scarcely had I settled back to a pull than I noticed that the motor, half tilted from its collision, was impeding progress by dragging in the water. Reaching over the stern to lift it higher, I discovered that the propeller was still in place and, apparently, uninjured. Turning the screw to look for scars, I was surprised to feel the handle of the flywheel nuzzling against my chest. For an instant the full significance of that innocent prod in the ribs eluded me. Then my jaw dropped with a gasp of astonishment as the wonder of the thing that had befallen struck home. The motor had accomplished the miracle of sustaining the full impact of the blow from the ridge of reef without so much as sheering the propeller-pin. It was still ready to run, and, half a minute later, it was doing so—heading shoreward again before wind and seas that continued to gain force with every passing minute.

While I may have been guilty of carelessness in not examining the engine at once, I might state in extenuation that the blow it had received was heavy enough to have disabled any kind of a propeller nine hundred and ninety-nine times out of a thousand. Why this did not happen here is only a matter of conjecture, but I am inclined to believe it was due to the fact that the collision was with a comparatively sharp pinnacle of rock, which made it possible for the heel of the motor to strike and be tilted upward while the blades of the screw missed even the hundredth of a second contact that would have resulted in a sheered pin. I subsequently had several pins sliced off when propeller blades came in contact with nothing more stable than floating driftwood. The racing of the screw which made me assume that the pin had been sheered on this occasion was, of course, due to the fact that the tilting of the motor from the crash had brought the wheel almost to the surface.

The elation induced by the discovery that I still had an engine capable of hurrying me on to land was responsible for my worst slip of the day—an oversight that came near exacting a heavy price. All the way across the shoals my deepest current of apprehension had been due to a realization that gasoline must be getting very near the bottom of the tank. The protected lee of the reef would have been the most favorable place I could expect to have for refilling. With the engine out of action, however, this had not occurred to me. Then, with the discovery that it was still in commission, my hands and mind were so occupied in hurrying on my way again before the storm developed overwhelming strength that I simply forgot all about gasoline until the last drop of it went up in an explosive gasp a half mile beyond the reef.

With the seas already rolling high again, putting about and heading back against them to quieter water was out of the question. There was nothing to do but swing round into the wind and try the efficacy of my bailing-bucket sea-anchor, improvised against just such an emergency. It was fortunate that the oars were already in place in their ring row-locks; also that the seas were still somewhat broken in force by the broad expanse of reef astern. I am inclined to doubt, indeed, if the boat could have survived being brought broadside to the weightier, steeper waves that were running a mile nearer land. Even as it was, the sea that crashed against her port side tore off the fastenings of the spray-hood and deluged her from bow to stern. Wallowing drunkenly under the heaviest load of water yet carried, she still yielded obedience to the oars. Sliding up the next wave quarteringly, she took a reduced dose of the rolling green, and its successor, met bow-on, she rode dry. Here I pitched the sea-anchor ahead and paid out its hundred feet of line slowly as the waves backed the boat away.

Despite a tendency to buck and tug like a roped broncho (due to the lack of a passage for a steady current), my makeshift sea-anchor performed quite effectually its function of holding the boat head-on to the seas. Although pitching wildly, she rolled out about as much water as was taken in, and that gave me a chance to turn to with a coffee-pot and stew-pan and bail her dry. Filling the tank with the specially devised can and hose was comparatively easy; without it I might well have spilled half a dozen gallons in getting one where it was needed.

(Continued on page 110)



December 1, 1924

Johnson Motor Company,
South Bend, Indiana.

Gentlemen:

I took one of your motors with me last Summer on an 800 mile canoe trip on the Dease, Liard and Frances Rivers - in Northern British Columbia and Southeastern Yukon. The motor behaved beautifully in every respect.

Practically the entire journey was in fast shallow water with several canyons thrown in for good luck - you can imagine some of the troubles encountered. But only did the Johnson motor behave perfectly but its light weight was a God-send over the long portages, of which there were many. Albert, my Liard River Indian, always referred to the motor as "strong little man."

The Indians of Frances Lake, Yukon, were much interested in our King canoe and motor - never having seen either before. That is the kind of the Moosehide boat. We put the first canoe and motor up Frances River and on Frances Lake - and maybe the last, as there is very little occasion for anyone to go there.

You make a good motor - my old one is still doing duty on the Stikine River, near Wrangell, Alaska.

Faithfully yours,

Edgerton

General Manager.



Light Weight - a Godsend over Long Portages"

EVERY year thousands of sportsmen are taking Johnson Motors along on their trips.

They know the Johnson is a "strong little man" who will do more than his share of the work without a grumble.

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But when they come to the long "carries" they appreciate also the *true portability* of the Johnson.

The Johnson drives a rowboat from 7 to 9 miles per hour, a canoe from 9 to 12.

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Yet, despite these improvements, the complete weight of only 35 pounds is retained.

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All are users of Old Man Joe's Gears—gears built solely for marine service—a right gear for each special condition (and believe me a gear built by men who take pride in their day's accomplishments), a gear in which no expense is spared in securing the best of tested materials.

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May Old Man Joe sit down with you and check over your problems and give you the benefit of his years of experience?

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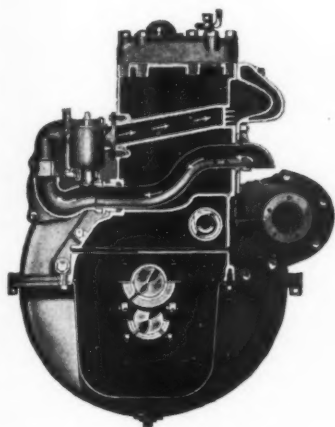
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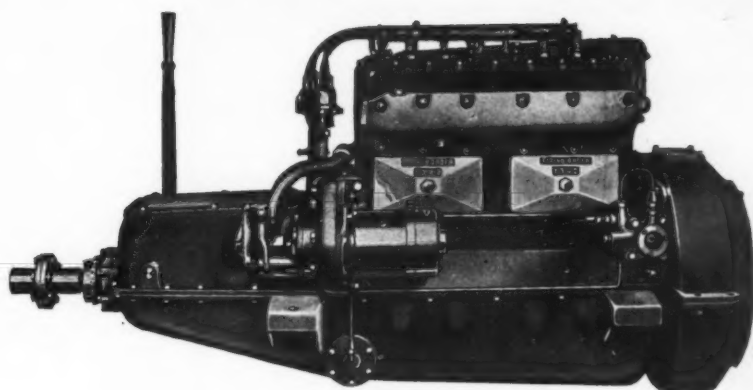
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The significance of the Erd S-4 is unmistakable. It bears the same relation to the marine motor industry today as did the first four-cylinder motor to the industry years ago. There is literally no equal for Erd S-4 performance, because the Erd S-4 marks as long a step forward now as did the multi-cylinder engine over the "double-opposed," in the dark ages of marine motor design.

On every side today you hear men marvel at the things the Erd S-4 does—things that would be entirely out of the question with any marine motor engineered and built in the ordinary way.

Only the S-4 will do what the S-4 does—and the secret is in the fact that the ERD is above and beyond the commonly accepted standards.

Yet these revolutionary results in the Erd S-4 have been achieved without radical departure from accepted principles and practice.

The fact is that the Erd S-4 is the embodiment of all that is best in automotive engineering thought—and the thoroughly scientific application of that thought.

Thus, through the scientific application of thermodynamics and a new perfection of gas distribution and utilization, the Erd, with only 179 cubic inch capacity, is made to yield 42½ H.P.

The ERD, indeed, has pioneered its way to an entirely new degree of performance and economy in motor boating—a power range from 22 H.P. at 1,000 R.P.M. to over 42½ H.P. at 2,100, combined with an extraordinary gasoline and oil economy.

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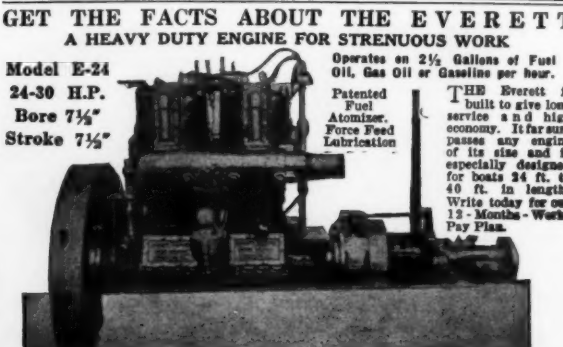
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Model E-24
24-30 H.P.
Bore 7 1/2"
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Operates on 2 1/2 Gallons of Fuel Oil, Gas Oil or Kerosene per hour.

Patented Fuel Atomizer.
Force Feed Lubrication

THE Everett is built to give long service and high economy. It far surpasses any engine of its size and is especially designed for boats 24 ft. to 40 ft. in length. Write today for our 15 - Month - Work-Pay Plan.

EVERETT BROS. MOTOR CO., BRUNSWICK, GA.

By Waterways to Gotham

(Continued from page 106)

and that could hardly have failed to be mixed with water. The smashed spray-hood I made no attempt to restore. It was not of much use in running before the wind and waves, and I had to have it down to get out to take in the sea-anchor anyway.

The instant the sea-anchor was aboard I started the engine, throttled it down, and ran slowly against the seas, watching for a favorable chance to turn. This I found in one of the occasional broadened intervals between crest and crest. As the boat descended to the trough I threw the timer all the way over and, as she jumped ahead at the kick of an accelerated screw, spun her round almost in her own length. The next wave did all it could to catch her broadside, but the maneuver was the wink of an eyelash too quick for the marauder. Not only did it fail to put anything solidier than spray aboard us, but it also had to endure the ignominy of having us shoot along for twenty yards on its foam-bristly back. It was an encouraging start for the last leg of the race.

I passed over a number of shoals as I raced on shoreward, but none shallow enough to create a risk of striking. The wind continued to rise, but the danger from this was rather more than offset by improved steering technique. There appeared to be a lot to learn about running an open boat before half-breaking seas, and the rudiments of the trick, at least, I was beginning to grasp. I was forced to do less bailing for the final five miles than at any other stage of the run before the storm.

I was hopeful right up to the last that a lumber or fishing camp would materialize at or near the point where I would have to attempt a landing, so that a distress signal sounded on my fog-horn might bring willing hands to pick up the pieces after the final crash in the surf. In fact, I had the long tin funnel laid ready to hand to snatch up for the bray of S. O. S. Vain hope! Nothing even remotely suggesting a human habitation sharpened to focus on the queuing lenses of my binoculars, either directly ahead or along the many miles of coast curving away to east and west. The one encouraging thing was the narrow ribbon of what appeared to be brown, sandy beach beginning to show beyond the surf hardly more than a point and a half off the port bow.

I was just starting to edge over to maneuver for the cushioned landing promised by the bit of beach when a tiny island, reef-begirt and tree-covered, detached itself from the coastline to starboard, with a sharp point of rocks jutting out a mile beyond. With both island and point plainly offering sheltered lees where landings could be made with ease and safety, the realization that it would be suicidal to attempt the four-point alteration of course necessary to reach either one of them gave me a feeling a bit akin to that with which a Lost Soul might look up from the Pit of the Damned to the shimmering portals of the Golden Gate. Of course I had to try the thing, but only to give it up by swinging back to present the stern to a curling wave whose predecessor had caught me quartering and left most of its broken crest in the bottom of the boat. Just how fortunate it was that my course had not been such as to leave me in a position to run for the lee of the island from the west I did not learn for a couple of days, when a walk along the shore revealed the intervening waters peppered so thick with rocks that the boat could not have failed to be smashed before it had penetrated beyond even the outer fringe of them.

By the time I had bailed the boat free of water again I was running into the humping swells at the beginning of a three-hundred-yard-wide line of surf. My first impression was that the bottom was a long gradually shoaling stretch of sand, and so it was—basically. But when I glimpsed black rock-points thrust up through the cottony fluff of the foam to both left and right, I realized that the channel, if any, was very restricted.

As the surf salvos sounded off for the final show-down, the situation was fairly clear. If I could avoid striking a rock or swamping in the surf, all that remained to be done to win the fight was to keep the boat from pounding to pieces when she hit the beach. For myself, I no longer had any excuse to worry. A man who cannot take care of himself in a surf with a life-preserver on—barring a crack on the head from a rock, of course—ought not to play around big waters in small boats.

To postpone the moment of striking until I was as far in as possible, I shut off and tilted the motor as the boat began to ride the outermost breaking swell and headed for the beach under hard-plied oars. I gasped for breath as she made the first plunge, but rather at the giddiness of the descent than from the menace of it. Where I had rather expected to be engulfed, the breaking wave simply put its shoulder behind the stern and drove the boat ahead for forty yards or more before running on ahead. Without the engine, however, I had not the momentum to get the jump on the succeeding waves in that

(Continued on page 116)

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Miss Brown Wins Against Big Odds

(Continued from page 96)

defending boats until shortly before the actual race. Five boats are allowed to a team and on the day of the race the Canadians were represented by one boat, Miss Brown, while the defenders had five, Miss Quincy, Miss Meadowmere, Blue Devil, Hadleyplane and E-Nee-Mo. Their chances were therefore less than five to one, as a point score was to decide, and as the first boat scores 200 points, the second 100, etc., it meant that the winner must be consistently in the lead.

Other events were on the program also to fill in between the heats of the 151 class. There were classes for outboard boats, 340 cubic inch class and a free-for-all class.

The first day's racing was begun by the little outboard class. Three boats took part on both days and one event each was won by J. MacBriar, and J. F. Minette, both with boats equipped with Johnson motors.

The 340 cubic inch class only had three contestants of which Buddah, a little boat owned by George Hazen was easily the fastest. She was able to play with the others, Hellfire and Fralabi, as she choose, and succeeded in winning the event on both days of racing.

The Free-for-all class had three competitors on each day, although there were four entrants in the class. The first race was a runaway for Miss Jamaica Bay, as she covered one lap of the five-mile course at the rate of 42.1 m.p.h. The other boats followed at a slower rate. The second race saw Miss Jamaica Bay crippled due to a cracked water jacket, and her place taken by the runabout Fralabi. The second race was taken by Buddah at 33.8 m.p.h.

From the spectator point of view the 151-inch hydroplane class proved the most exciting. There were to be three heats of fifteen miles each. One on Saturday, and two more on Sunday. While consistency is not one of the strong points of the two-cycle engines used in these little boats, a great measure of credit is due to L. C. Brown, the owner of the Canadian challenger. At the preparatory signal for each of the three heats, Miss Brown appeared promptly on time with her engine performing properly, and consistently. This cannot be said of some of the defending boats, as it frequently happened that some of them had difficulties in starting their engines, and getting away promptly when required. In the first heat, Blue Devil did not start at all, the other five boats got away promptly, with the exception of Hadleyplane, which had difficulty in getting started. A peculiarity of the behavior of these little boats is shown in this heat, inasmuch as Hadleyplane later covered the third lap in 4:12, and the fourth and fifth laps in 4:09 each. These three laps are by far the fastest of the entire series, and in fact the two fast laps establish a new competitive record for boats of this class. The speed in these two was 36.18 m.p.h., while the previous lap to these two was 35.64, or for the three laps together a speed of 36 m.p.h. was maintained for 7½ miles. This is noticeably faster than any other boats in the contest.

The second heat was characterized by a cranky spell on the

part of Miss Quincy, as she was unable to get started in either the second or third heats. The battle for first place was hotly contested between E-Nee-Mo and Miss Brown. Miss Brown had the advantage at the end of the first lap, but was being closely pressed by E-Nee-Mo at the second lap. The end of the third and fourth laps saw the two boats running stem to stem, and E-Nee-Mo succeeded in gaining a few seconds during the fifth lap. At the finish she was only a matter of six seconds ahead of Miss Brown, so that E-Nee-Mo took first place with Miss Brown second. This lap tied the point score as both Canada and the United States team had a point total of 300 each. Great excitement was caused in this heat, as Hadleyplane at the westerly turning mark had run into and practically cut in two a spectator row boat, which got into the course right at the turn. The Coast Guard officials who were patrolling the course at that particular moment were busy elsewhere, and the occupants of the row boat did not seem to realize their danger, until too late. As the hydroplanes approached, they were narrowly avoided by the boats ahead of Hadleyplane, but in their frantic haste to row away from the danger zone, they succeeded only in getting directly in front of Hadleyplane, who could not maneuver his boat quickly enough to avoid them. The two boys who were occupying the boat were injured somewhat, but were quickly picked up by the Coast Guard and brought in to the emergency Red Cross station, where they were attended to.

The third and final heat later in the same day brought out only four contestants. Blue Devil could not get going, and Miss Quincy also had difficulties. It was easily seen that E-Nee-Mo and Miss Brown were to fight the battle among themselves, as Miss Meadowmere was not in the same class with them, and Hadleyplane, due to injuries in the second lap, was compelled to withdraw. At the start of this heat, Miss Brown seemed to be in a poor position, inasmuch as the other boats were at least four or five seconds ahead of her, but by a clever turn at the first mark, Captain Brown turned the tables on the others, and swung his boat sharply into the lead amid the cheers of the crowd. He maintained his commanding position throughout the remainder of the race, and was from five to six seconds ahead at the end of each lap. At the finish, he was seven seconds ahead of E-Nee-Mo, and was successful in winning both this heat and the entire series. Since the trophy has thus been won by Canada, it is proposed to issue an immediate challenge which will insure a contest next year in Canadian waters, at which the Jamaica Bay speedsters will endeavor to bring the trophy back to the United States.

A summary of the results and the time for each lap follows:

Outboard Motor Class. Distance 2 1-2 miles.		August 8		August 9	
Boat	Owner	1st lap	2nd lap	1st lap	2nd lap
J. F. Minette		20:30		22:56	
J. MacBriar		20:05		23:04	
W. Jensen		21:40		24:37	
All Johnson Motors.					

340 Cubic inch class. Distance 5 miles		August 8		August 9	
Boat	Owner	1st lap	2nd lap	1st lap	2nd lap
Buddah	G. Hazen	6:02	6:10	5:18	5:11
Hellfire	F. Kissner	6:18	6:33	5:17	5:12.2
Fralabi	J. F. Priest	6:01	6:15	6:30	7:47

Free for All. Distance 5 miles.		August 8		August 9	
Boat	Owner	1st lap	2nd lap	1st lap	2nd lap
Black Beauty	A. E. Brenner	4:19	4:31	4:39	4:20
Buddah	G. Hazen	4:33	4:19	4:34	4:18
Miss Jamaica Bay	C. Ripp	4:06	3:34	D. N. S.	8:03
Fralabi	J. F. Priest	D. N. S.	....	8:29	8:03

International Race, 151 cubic inch class. Distance 15 miles. First Heat, August 8.		1st lap	2nd lap	3d lap	4th lap	5th lap	6th lap	Total	M.P.H.
Boat	Owner	1st lap	2nd lap	3d lap	4th lap	5th lap	6th lap	Total	M.P.H.
Miss Brown	L. C. Brown	4:35	4:33	4:33	4:30	4:28	4:28	27:07	33.2
Miss Quincy	C. Ripp	4:23	4:56	4:54	5:01	4:40	4:31	28:25	31.6
Miss Meadowmere	F. Ripp	4:47	4:43	5:19	4:40	5:14	6:39	31:37	28.5
Blue Devil	O. Stoye	5:06	5:19	5:19	4:39	5:14	6:39	31:37	28.5
Hadleyplane	C. S. Hadley	D. N. S.	....	....	....	....	....	31:12	28.8
E-Nee-Mo	Jos. Clayton	4:40	4:33	4:32	4:31	4:36	4:33	27:25	32.8

International Race, 151 cubic inch class. Distance 15 miles. Second Heat, August 9.		1st lap	2nd lap	3d lap	4th lap	5th lap	6th lap	Total	M.P.H.
Boat	Owner	1st lap	2nd lap	3d lap	4th lap	5th lap	6th lap	Total	M.P.H.
Miss Brown	L. C. Brown	4:29	4:34	4:32	4:33	4:31	4:30	27:09	33.1
Miss Quincy	C. Ripp	4:47	4:43	5:06	4:24	6:15	6:18	34:35	26.1
Miss Meadowmere	F. Ripp	5:32	5:55	5:59	5:44	5:49	6:00	34:59	25.8
Blue Devil	O. Stoye	4:32	4:26	8:45	D. N. F.	....	....	27:03	33.4
Hadleyplane	C. S. Hadley	4:35	4:31	4:29	4:34	4:36	4:28	27:03	33.4
E-Nee-Mo	Jos. Clayton	4:35	4:31	4:29	4:34	4:36	4:28	27:03	33.4

International Race, 151 cubic inch class. Distance 15 miles. Third Heat, August 9.		1st lap	2nd lap	3d lap	4th lap	5th lap	6th lap	Total	M. P. H.
Boat	Owner	1st lap	2nd lap	3d lap	4th lap	5th lap	6th lap	Total	M. P. H.
Miss Brown	L. C. Brown	4:30	4:24	4:27	4:25	4:25	4:26	26:37	33.8
Miss Quincy	C. Ripp	4:41	4:32	4:30	4:36	5:46	6:14	30:19	29.7
Miss Meadowmere	F. Ripp	5:07	5:43	D.N.F.	....	....	....	....	....
Blue Devil	O. Stoye	4:35	4:25	4:26	4:27	4:24	5:27	26:44	33.7
Hadleyplane	C. S. Hadley	4:35	4:25	4:26	4:27	4:24	5:27	26:44	33.7
E-Nee-Mo	Jos. Clayton	4:35	4:25	4:26	4:27	4:24	5:27	26:44	33.7

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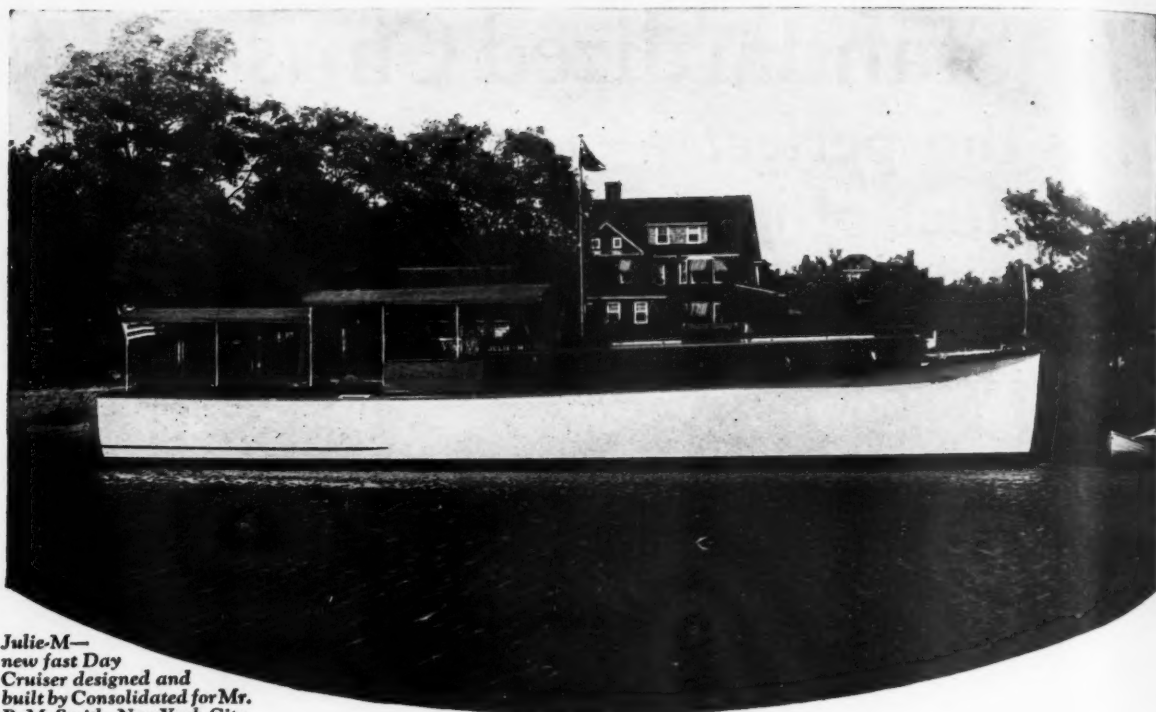
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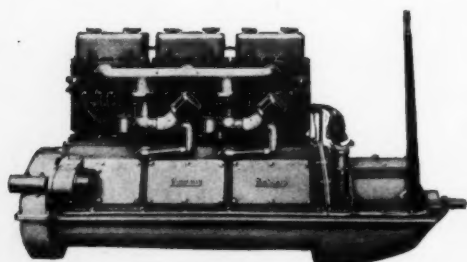
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Advertising Index will be found on page 146

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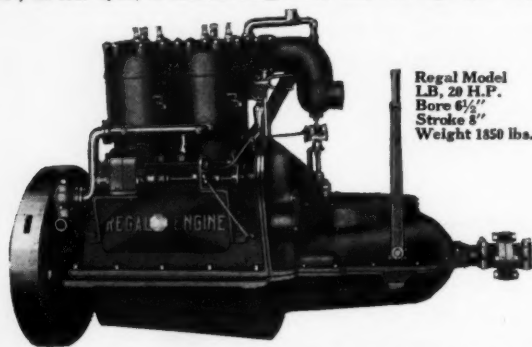


Ten to twelve people can be readily accommodated for day sailing, as shown by this view of Julie-M

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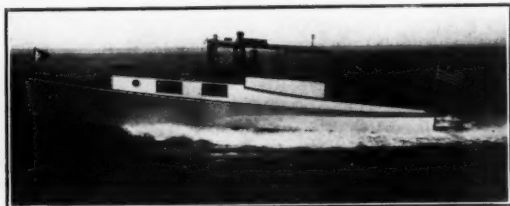
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By Waterways to Gotham

(Continued from page 110)

way, and so each one of them in turn barged right on over the boat, leaving her wallowing deeper after every deluge.

More than half full of water while still less than half the way in, swamping before I reached the shallows seemed inevitable. Anxious to run into water at least shoal enough to give me a footing and a chance to keep the boat from swinging broadside and being rolled, I was pulling my hardest when the tail of my eye caught what I took to be the outlines of rocks rearing high above the spray of the waves that shattered against them. It was necessary to swing the boat sharply to the right to miss the barrier, and as the next wave drove me by, I had to bring my port oar smartly inboard to keep from cracking it against the blackened ribs of an ancient wreck. I had just managed to bring her bow-on to the beach again when she grounded, crunchingly, on hard sand. The next breaker swept over her from end to end.

Since I had been rehearsing mentally the next act for the last two or three hours, I was practically letter perfect in the theory of it. The idea was to tumble over as the boat grounded, leap to the bow and run the lightened craft right up on the beach out of harm's way. The theory was perfect. Practice, unfortunately, progressed only so far as the tumbling overboard. This I did so thoroughly that I was still clawing bottom when the boat—doing the identical thing I had been planning so desperately to prevent—swung sideways and, driven by the waves, came bumping along over my prostrate anatomy. Had I not been wearing a life-preserver my protesting hulk would have been a comparatively simple hurdle and the agony would have been quickly over. The buoyant kapok, however, kept me bobbing up just enough to turn the thing into a rough-and-tumble, with the boat on top, and me—eating impartially water, sand and the paint off the keel—underneath.

After mopping up twenty feet of the bottom with my limp frame, the boat finally ground it deeply enough into the sand to get over. Spitting water and profanity, I reared my abused head just in time to see my late command lodge solidly with her lakeward gunwale against the bottom and begin to fill with sand, the one thing I had feared above all others.

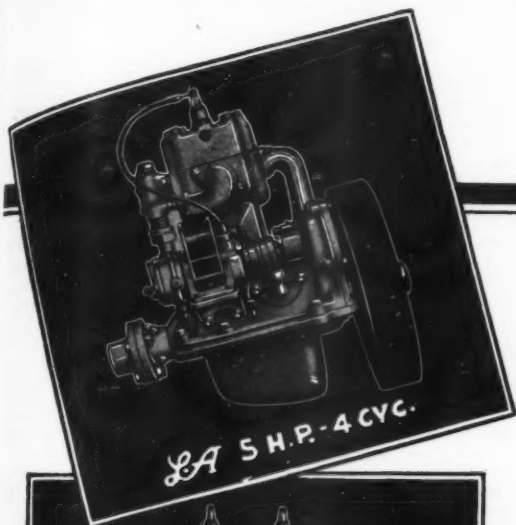
If there is anything that makes a rough, imperfect lump of human clay madder through and through than being mauled by a dumb animal, it is being mishandled by a dumb object that is not even imbued with the spark of lower life. When it is something that he has fancied his servant, and which he has moved to his will, the irritation is all the worse. I have seen an Alaska musher beat with a club the runner of a sled which, after his controlling geepole had broken on a hill, had knocked him down and traversed the length of his spine.

I did not go quite the length of flying into a tantrum and beating up my perversely behaving boat, but in trying to tear her loose with one wild yank from the embraces of the encroaching sands into which she was settling so lovingly and contentedly, I was doubtless guilty of seeking an equally childish and futile emotional outlet. My mighty yo-heave-ho moved the bow perhaps half an inch, and it settled back the instant the heave was over. One of the vertebrae near the base of my spinal column moved a slightly less distance, but remained where it stopped. That was because it must have run along the groove and slipped into the notch caused by the displacement of an ancient football injury. I had gone off the field on a stretcher the first time it happened, and at each subsequent recurrence, in various odd and impossible corners of the world, the medico inheriting the case—ranging from a *babu* interne at Mandalay to a Persian *mirza* with an American correspondence school degree at Bushire—had insisted on a considerable spell of inaction to restore the ruptured ligaments.

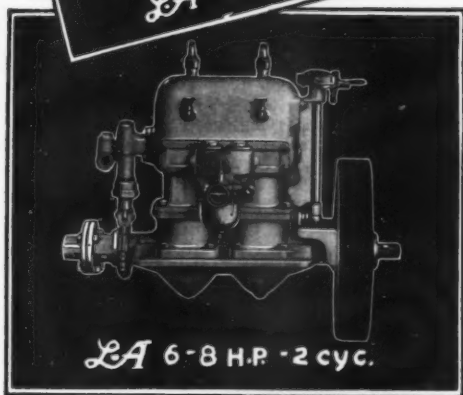
But the present was hardly a propitious moment for a rest-cure. With Science absent and Faith floored, there was nothing to do but let Nature take her course. All the rest-cure I had was in the form of the enforced hydropathic resulting from settling down into the water at the half-paralyzing pressure of the misplaced vertebrae on the spinal-cord. The cold touch of the water numbed the pain, and I could have done nicely with several minutes more of it had not the boat, battered beachward before the wind-driven tide, begun to exhibit a desire to occupy my place. It took both hands dragging on one of the bow handles to pull me to my feet, but once up, it transpired that I was far less helpless than my imagination had led me to fancy. I could walk, stoop over to pick things up, and even—by setting myself carefully and distributing the strain—throw all my weight into a lift or a pull. Far from being crippled, I was in fairly good shape to begin salvage operations before drifting sand and rising water precluded all hopes of success.

With the boat in no danger save from that of slow burial, I was able, fortunately, to proceed with my work at a deliberate

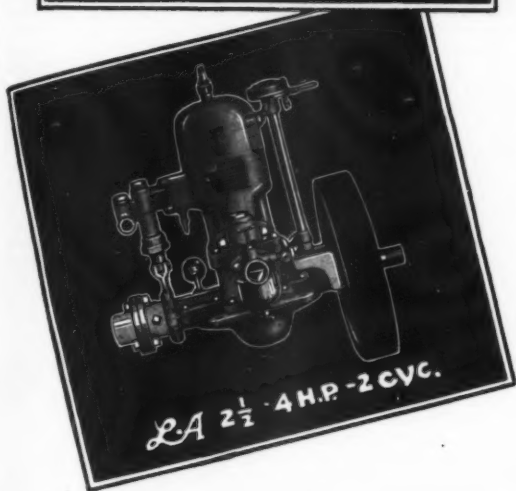
(Continued on page 118)



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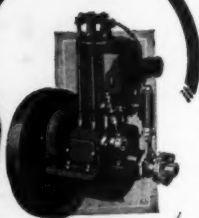
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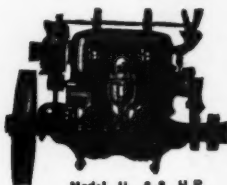
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By Waterways to Gotham

(Continued from page 116)

pace. After unclamping the engine and carrying it to the beach, the next thing to be done was to lighten the boat of its load. Although all of the canvas bags had been floating in water, none of them had taken much moisture inside. Neither did it appear that water had penetrated beneath the spring-caps of the gasoline cans. Such stuff as was in the forward compartment had to remain for a while, both because that space was half full of water and because my back was not equal to wriggling in through the small door in search of it.

It was against just such a storm and forced landing as this that I had planned the water-tight compartment forward, with a hatch on top to give easy access in emergency. The failure of the builders to follow my orders in this important respect left me with a boat that was not only easier to swamp, as well as less buoyant when swamped, but was also far more difficult to clear of load and of water when driven onto the beach. She was a wonderful little craft withal, and my confidence in and affection for her grew from day to day. Yet a compartment from which water could be entirely excluded, and which could be reached without a wriggling belly-crawl, would have saved me many worries and much work.

With all movables high and dry on the beach, twenty feet back and two feet above the rising water line, the next thing to attack was the sand, several inches of which had washed over the starboard gunwale and now held the boat securely in its tightening grasp. Discovering that, as long as the boat was lying on her side, the waves would wash in the sand faster than I could scoop it out with a frying-pan, I concentrated on digging a hole under the submerged gunwale in which to insert the butt of an oar to use as a lever. Then, with my roller as a fulcrum, I gradually worked the gunwale free from the clutches of the sand and worried the boat up on an even keel. Water still splashed over faster than I could bail it out, but, with the encroachment of sand from the outside checked, I soon got rid of the most of that which had accumulated inside. That lightened her enough to let me shove the roller under the bow and drag her a few feet farther toward the beach.

Skids improvised from driftwood slabs helped me work the boat along to a second roller chopped from a length of pine trunk. This elevated her enough to be above all but the splash of the far-spent breakers and finally gave me a chance to bail her dry. After that it was only a matter of time and hard, patient work to bring her all the way out on the beach. Driftwood, fortunately, was plentiful, so that the final fifty feet I was able to lay an almost solid skidway over which to run the rollers.

About two hours had elapsed from the time I first grounded until the unloaded boat was clear of the water. Considering that most of my effort was exerted in lifting and pulling at a weight of from four to six hundred pounds, not counting the suck of the wet sand on the bottom of the boat, it is a rather remarkable fact that a back injury which had previously put me on the shelf for days at a stretch did not seriously hamper me in the work. Indeed, although there have been a number of spells of lameness since, especially when sleeping in the snows of the Canadian Rockies a few months later, the effects of that extremely painful initial wrench did not really handicap me for active effort at any time during the remainder of the voyage.

With the boat out of danger for the moment at least, I overhauled my outfit and spread it out to dry. With bedding and clothing damp but not soaked, about the only damage was to some unprotected provisions in the open grub-box and the films in the two cameras. The rest of the films and food was either in cans or canvas sacks. A bath, a change to dry togs, and a meal of fried sausages and potatoes baked by the embers of oaken driftwood made the world a cheerier place to live in.

The loss of my chart made location of the point at which I had hit the coast entirely a matter of guesswork. I knew that there were numerous jutting points and small islands along the north shore, so that the presence of those a couple of miles eastward of where I had landed were of little help in fixing my position. With the water still encroaching on the beach as the wind increased in force, it did not seem advisable to explore far afield for the present. A half mile walk along the shore in both directions, however, convinced me of one thing, and that was that I had been in no end of luck in the matter of a landing place. Where the forty-foot-wide mouth of a small river a quarter of a mile to the west offered the one point at which I could have done better, practically everywhere else the coast was armored with off-shore rocks, among which I must certainly have fared worse. Regret at having missed the sheltered lagoon leading back from the river mouth was but a drop in the bucket of my thankfulness over having stumbled on a

(Continued on page 120)

Detroit Marine-Aero Engine

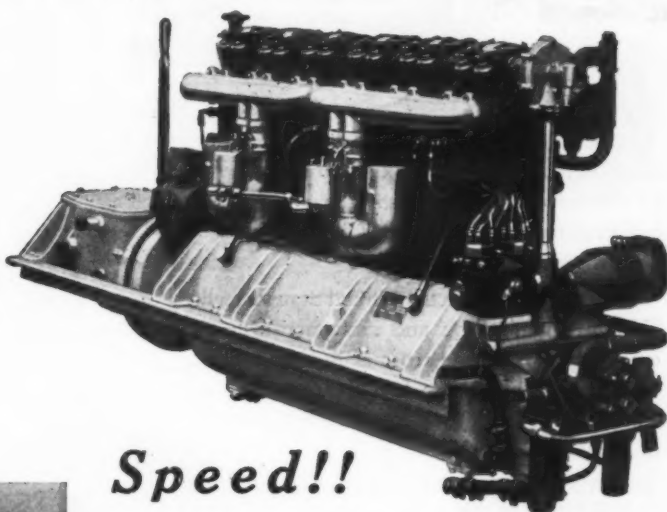
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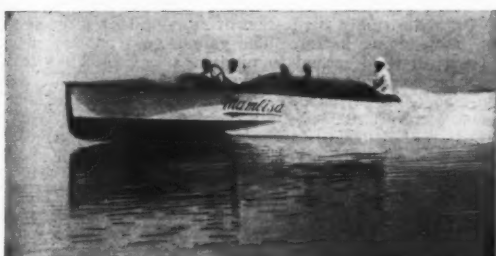
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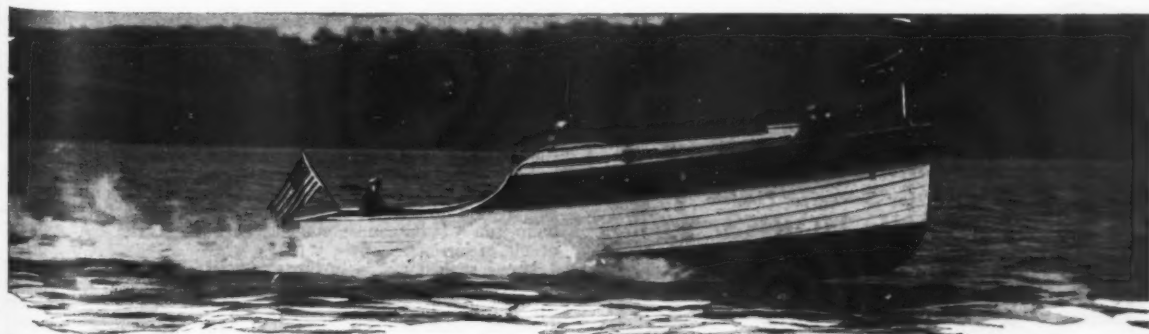
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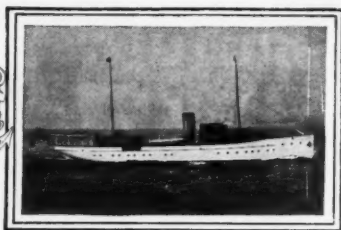
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By Waterways to Gotham

(Continued from page 118)

way through the rocks to a comparatively easy landing on a beach of soft sand.

Still blowing from a sky unflecked of cloud, the wind continued to augment steadily in strength as the afternoon shadows lengthened, all the time driving the breakers farther and farther up the beach. At four o'clock high-water mark was twenty feet nearer the crest of the sand spit on which I had landed than when the boat had finally been dragged out. This rate of rise made it seem probable that the waves swept completely over the spit at the height of a southerly storm, which surmise was confirmed by the discovery of a line of driftwood on the farther side of a green-scummed sink immediately back of the beach. As the task of working the boat along through the inner breakers to the sheltered river mouth promised to be a good deal more than a one-man job, there was nothing to do but wait and see if the present blow was going to develop sufficient strength to put the water over the top of my precarious refuge. Even if such a rise did occur, it was hard to see how anything worse could result from it than the carrying of the boat down into the sink where, moored to the forest trees beyond, it ought to be as well protected as in the estuary of the little river.

Laying a skidway ahead, I dragged the boat up to the ridge of the spit, propped it on an even keel, and dumped all my outfit back in the bottom to hold it down. After another piping hot meal, I laid a bed platform in the boat with the cut and fitted boards brought along for that purpose, blew up my inflatable sleeping-pocket, extended the canvas spray-hood to cover the boat all the way back to the stern, and turned in.

The muddy sunset had a morbid, choleric, bilious sort of a cast, with not a ruddy suggestion of fair-weather promise showing up to its dying flicker. The gale let out another notch as the long twilight deepened to night, and a little after dark an aspiring breaker rolled in far enough to put a sizzling damper on the embers of my late camp-fire. About the same time the shrapnel-spatter of blown spray began its rat-a-tat on the taut canvas of my sheltering canopy, and an hour later solid water was swirling past my perch and tumbling over into the sink beyond.

Unable to move the well ballasted boat by direct methods, the treacherous flood fell back on the low, contemptible trick of undermining the props, thereby forcing me to tumble out into the spray-shot darkness on my feet before I was tumbled out on my head. I had just pinched a bare toe under a roller in a clumsy attempt to start the boat tobogganing down to the sink, when a spatter of raindrops and a scurrying of blown leaves called my attention to the fact that the stars above the opaque wall of the forest were being blotted out by a turret of advancing cloud. Conflicting tongues of air met, grappled and struggled for mastery in the darkness. Then the wind from the lake fell lighter, faltered, and died down, to be succeeded by a moist, gusty land breeze, dank with the smell of marshes and composed of about equal parts of flying leaves and fluttering mosquitoes.

There had been several trying intervals in the course of the day, but for sheer soul and body-rendering misery nothing to compare with the half hour of carnage that followed the advent of that thirsting horde of blood-suckers. It was probably an inflamed imagination which prompted the fancy that the fetid land-breeze was a funnel-shaped suck designed to draw down upon my tortured anatomy every mosquito south of Superior; but at any rate (with the trumpeting pests crowding so thick that they got in each other's way), things could not possibly have been worse even had such a concentrator been functioning. Being dressed to meet a shower of blown spray rather than a hurtled wall of bloodhounds, the abnormally extensive expanses of readily puncturable epidermis made me all the more vulnerable to the devastating attack. I did not need to be told of the futility of trying to employ my supposedly infallible mosquitoicide dope against such odds. Acting from instinct rather than considered thought, I flailed myself through the ranks of the enemy to the boggy bank of the green-scummed sink and buried myself to the eyes under its evil-smelling waters. I have seen cattle on the Missouri and cariboo on the Yukon, snorting with anger and agony, bury themselves from the swarming tormentor in exactly the same way. In his last-ditch straits man always inclines to follow the way of the dumb brute, and always to his advantage, provided he does not allow the lump-iron of human intelligence to deflect the sure-pointing needle of instinct.

Man's spoken words in times of great trial, be they never so sincere, are seldom more than a superficial index to the working of his soul. To a listener on the bank, the sounds that spattered from my scum-muffled lips might have had more the seeming of reflections on the ancestry of mosquitoes than of prayer. Yet from the depth of my innermost being there was being winged an appeal to the God of the Lake Winds to send back the one Rescuer that could clear the field of the enemy. If that

(Continued on page 122)

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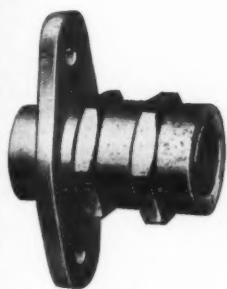


Fig. 120
Plain Stuffing Box

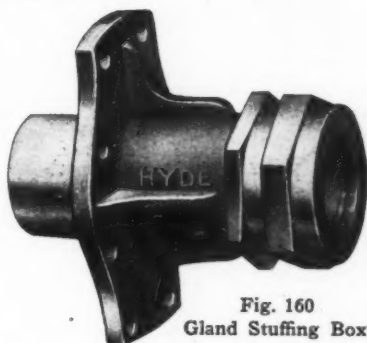


Fig. 160
Gland Stuffing Box

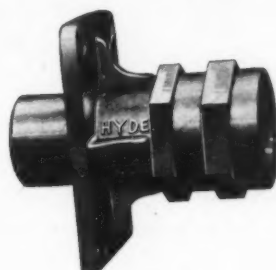


Fig. 140
Square Flange Stuffing Box



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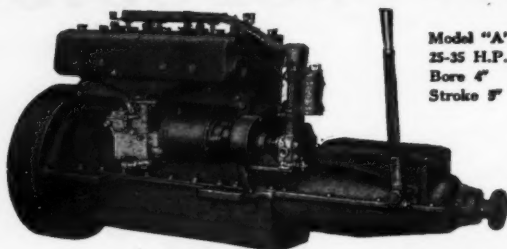
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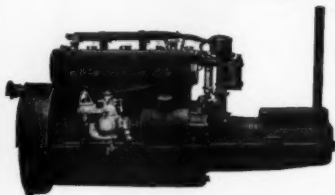
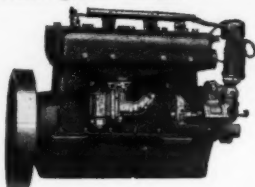


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By Waterways to Gotham

(Continued from page 120)

dear, beneficent, mosquito-paralyzing southeast gale would only return, I promised to welcome it with extended arms even if it blew me and the boat into the tree-tops the next minute.

The landward squall—apparently no more than a local pocket of protest—was speedily obliterated by the major atmospheric movement once its first fine careless rapture was spent. About the only traces of it remaining were my swollen arms and legs and several cubic feet of massed mosquitoes which had taken refuge from the lake wind in my boat as their countless millions of brethren had been swept back to the forest. As they could not lift a leg above the gunwales without being swept out of the picture, however, all I had to do to escape them was to shake out my sleeping-bag and spread it on the wind-swept sand. The threat of the mounting tide had lost its terrors after that hour of misery and mosquitoes in the sink.

Washing off the stains of battle in a swift souse under the first line of breakers, I slipped into dry togs and turned in to drop off into the sweet, dreamless slumber of the tired ten-year-old. The day on which I had planned to put up a new record with a run from Manistique to Mackinac was at an end. For a day that had started with so bright and bland a fair-weather sunrise, I told myself drowsily, this one had contrived to crowd in a considerable variety of action. When my eyes opened again it was to blink into another golden sunrise.

(To be continued)

Care of Ignition Timing Apparatus

(Continued from page 49)

in a manner that will bring both electrodes in contact and being separated with great rapidity.

Figure 2 illustrates a low tension system. In starting on the batteries, the two-way switch is in contact with *T*. The movable electrode *D* of the first cylinder being placed in contact with the insulated electrode *B* the current will flow from the battery through the coil *K* through the switch to the insulated electrode *B*. The movable electrode *D*, being in contact with the insulated electrode *B*, the current returns to the battery through *D* and the metal of the engine, thus completing the circuit. As the cam *G* turns in the direction indicated its nose passes from under *F*, which drops, and in dropping a shoulder at the upper end of *F* strikes an external arm of *D*, causing the contact points *D* to be quickly snapped apart from *B*, thereby producing an arc which ignites the gas charge. This operation repeats for each cylinder.

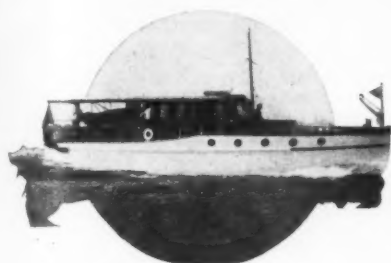
In high tension ignition an automatic device is placed in the primary circuit, which closes and opens the circuit at the time a spark is required. In operation, the nose of the cam in revolving engages the contact maker, which completes the primary circuit and allows the current to flow from the battery through the primary winding of the coil, thus magnetizing the core. The primary circuit is now broken by the action of the cam and magnetic changes take place in the coil which induce a momentary high tension current in the secondary circuit. The great pressure of this current forces it across the air gap of the spark plug and as it bridges the gap a spark is produced. The arrows indicate the paths of the currents. At break, the primary current is slowed down by the condenser, thus preventing an arc between contact breaker points. Figure 3 illustrates a typical high tension ignition system.

A contact breaker is shown in illustration 4. This device keeps the circuit closed at all times except during the very brief interval necessary for the passage of the spark at the plug points. It is used to advantage on engines running at high speeds, as it allows time for the magnetic flux in the core of the coil to attain density sufficient to produce a good hot spark.

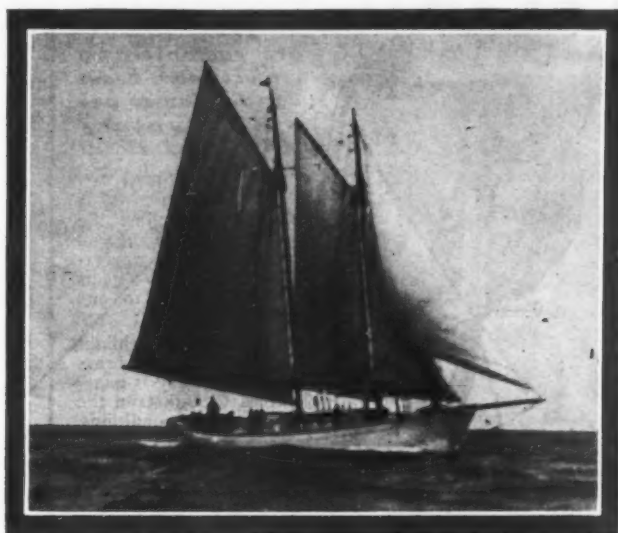
With regard to the care and adjustment of ignition timing apparatus, it should be remembered that the adjustments are set to a very fine and accurate point when the engine leaves the place of manufacture; if, however, trouble should arise with the ignition system, there is one point I would like to impress upon the trouble hunter, that is, first see that there is gasoline in the gas tank, second, that the cock in gas line between tank and carburetor is open. This having been found O. K. before attempting to take down or apart any of the timing apparatus, study the entire system, making certain that there are no loose or broken connections, or broken springs, which might tend to either hold the circuit open or closed. After this has been done inspect all contacts, making certain that same are clean, thus permitting proper electrical connections. Contacts which may be found dirty, oily, pitted, loose or in any way out, readjust same as near as possible to the original position. Wiring which may have become oil-soaked should be replaced with new, as the oil will act as a conductor and sparks may even jump, in which case ignition will not take place within the cylinder. Great care should be exercised in order that wiring is not changed, or the firing order of cylinders altered.

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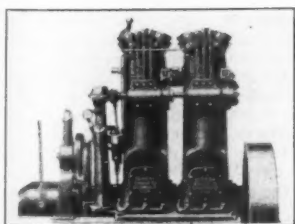


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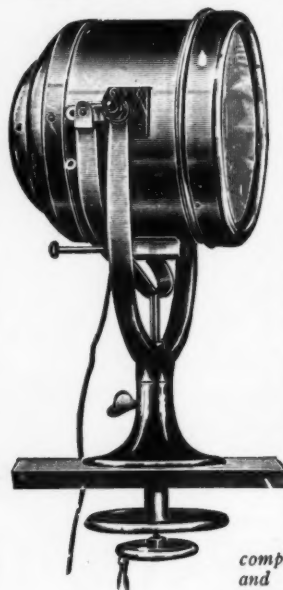
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Curing Overheating Troubles

(Continued from page 51)

hot water would have a tendency to trap there. On motors with flat-topped heads, having the water outlet piping led from the center of the head, the rake of the motor installation sometimes causes hot water to trap in the forward part of the head jacket. The only remedy in cases of this sort is to relocate this outlet in the head so that it will be at the highest part of the jacket casting. Where hot water is trapped in the jacket around either of the valve pockets, it is possible to relieve this by running a small piece of tubing from the top of this jacket to some other portion of the jacket which is higher, unless you are able to chip out the surplus metal on the inside of this jacket. Where hot spots develop from thick places in the cylinder walls, and they are rather small, try to chip out the surplus metal with a cape chisel, or even cut it down with a file or the blade of a hack-saw; that is, provided you can reach it. Otherwise it is best to take it to a repair shop and see what they can do.

Summing up the question of proper circulation of the cooling water, as much of it depends upon you to keep it in good shape as it does upon the manufacturer for designing and building it correctly. All of us make mistakes, and it would be an admirable thing for you to do if, after finding and remedying your trouble, you would drop the manufacturer a letter and explain in detail just what you had done. Even if he didn't send you a check to cover the expense of the repair or replacement, it might show him where the design was faulty, and thus pave the way for further improvements in his products which in turn are sold to the boating enthusiasts the world over.

Naturally, this article only touches on the main troubles which might happen, and there are hundreds of combinations of one thing and another which will appear at first thought not to be covered; however, if any of you run into a case of this sort, drop me a line in care of this magazine, explaining in as much detail just what your trouble is, and I will be very glad to write you more fully.

V. L. S., Wilmington, Del.

Faulty Circulation and Overheating

ALL cases of overheating cannot be laid to faulty circulation. The engine will run hotter than it should if lubrication is not adequate, due to the increased friction, which causes heating; or the overheating may be due to an over-rich mixture. When a motor overheats, it is not immediately possible to ascertain whether the trouble is caused by inadequate cooling, improper mixture proportions or faulty lubrication. By studying the character of the exhaust gases it can be determined if the engine is overheating because the mixture is too rich. If the exhaust gases have a pungent odor and cause the eyes to water, and if black smoke issues from the exhaust pipe, the mixture may be suspected. Should the engine overheat from lack of lubrication it will pound much more than if the trouble was due to faulty circulation of the cooling water or the mixture being too rich. Overheating is often due to excessive carbon deposits in the combustion chamber and on the piston head. The continued firing of the engine after the spark has been shut off is a sure indication that incandescent particles of carbon are igniting the charge, and inability to advance the spark as formerly without knocking results from the same condition. A retarded spark with the engine under load will cause overheating, and improper valve timing should not be overlooked in this connection. Poor water circulation due to faulty design of the water jacket space or the inlet and outlet connections being wrongly located is very unlikely in the modern marine motor. It is more likely that the water jacket is clogged with rust and scale or that the circulating pump is not functioning properly. The operation of the pump can be easily observed at the overflow outlet, but the condition of the water jacket is not as evident.

The water in most localities contains salt and some carbonates or sulphates, together with mineral or vegetable matter in suspension. Calcium carbonate and magnesium carbonate begin to precipitate when the temperature of the water reaches 180 degrees Fahrenheit and when the temperature is 212 degrees F. the greater part of the carbonate will be deposited. The sulphates remain in solution until the temperature reaches 300 degrees F., which temperature should not be reached in the jacket water of a motor. Calcium carbonate and magnesium carbonate form a porous deposit which does not adhere closely to the iron, but often there is some other substance present which mixes with the deposit and forms a hard scale. These deposits are not good conductors of heat as compared with the cylinder walls, and besides interfering with the circulation of the cooling water, retard the transfer of heat to the water. As the cylinders are generally cast iron, a certain amount of rust will form and be deposited with the scale. When the waterjacket space is inaccessible it may be that overheating is due to the retention of part of the sand core in the space. The core is made of sand and held together with some binding material and baked. Often

(Continued on page 126)

As you read Lewis R. Froeman's gripping story, "By Waterways to Gotham," in this issue of Motor Boating, remember it was *Elto*—the Fast Light Twin Outboard Motor that alone drove his 18-ft. skiff those 2,000 thrilling miles "from Milwaukee to the Sea."



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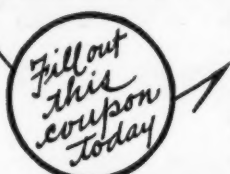
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Monarch Valve & Carburetor Co.
12 Front Street Brooklyn, N. Y.

Faulty Circulation and Overheating

(Continued from page 124)

the core is reinforced with wires to hold it in shape, and a piece of this core may become lodged in a corner or angle and not be loosened until the engine has been in operation for some time, and then it may be carried into a pipe or opening, partially or wholly restricting the flow of cooling water, or it may slowly dissolve and settle in some corner of the water jacket and prevent that part from cooling properly.

It is no trouble at all to clean out the water jacket of a removable head motor. Where mechanical means are not practical, a solution of hydrofluoric acid and water may be used with good results to dissolve the sand and rust or scale; the proportions being about one part hydrofluoric acid to ten parts water. All but one upper opening in the jacket should be plugged and the jacket filled with the solution and left over night. In the morning the dissolved or loosened sand, etc., can be washed out with water under pressure. After washing out the acid solution it is well to neutralize any acid that might remain with lime water. Hydrofluoric acid has a great affinity for sand and other siliceous matter and must be kept in metal or rubber containers. While the full strength acid will attack iron, the dilute solution recommended will have no material effect on the metal in the short time required to dissolve the sediment.

After the jacket space has dried, paint the interior with a heatproof paint. This is best done by plugging all the openings but one and filling the jacket with paint. A tire valve soldered to the last plug will allow an air pressure to be applied which will force the paint into every crack and crevice. After the pressure has been on for a few minutes there is no advantage in leaving the paint in the jacket any longer.

Should the use of acid be undesirable, soda ash, potash, or salsoda may be used to cut the rust and some forms of scale, which it will loosen or dissolve so that they can be washed out with a stream of water or steam. Results will be more rapid if the solution is used hot.

It is possible that with some motors the circulation and, consequently, the cooling, may be improved by relocating or tapping in another water connection. Where the water enters the jacket at one end near the bottom and flows out at the top of the other, the cylinder at the farthest end from the inlet, naturally, will not be cooled as well as the one which receives the cooling water first. Many engines are built in this manner and they cool perfectly, but there are exceptions to most any rule. However, do not attempt to alter the cooling system of any motor until you have made a careful study of the conditions and know that the water is not circulating properly through a fault in the design. Remember that the designer of the motor has worked things out pretty carefully in an endeavor to produce a motor equal to or better than the others. The fault is more apt to be with the circulating pump or the connections. Worn gears or plungers and leaky check valves will prevent the pump from delivering its full capacity. Under such conditions, any engine will overheat. A simple little air leak in the hose connection between the sea cock and the pump will greatly reduce the capacity of the pump and trouble will be experienced in making the pump pick up the water. The best remedy for a worn pump is a new one, although a satisfactory repair can often be made by fitting a brass liner to fill the space at the end of the gears. In some cases coating the gear teeth with babbitt will put the pump back in condition. The teeth should first be brightened and then tinned. By dipping the gear in molten babbitt a coating of babbitt can be built up on the teeth which will make the gears mesh closely again. Practically the same treatment is applicable to a plunger pump.

W. B. M., Newburgh, N. Y.

The New Hall-Scott with Reduction Gear

The first of the new six cylinder 100 h.p. HSR model, Hall-Scott engines, which are fitted with a reduction gear, have arrived in the East, and are now on display at the New York branch of this company. This motor is a heavy duty, fast turning machine, and the result of experimental work which has been going on for many months. A four cylinder of the same general type is also enroute from the plant at Berkeley, California, and prompt delivery can be made on these machines. The six cylinder machine develops full 100 h.p. at the propeller shaft at 600 or 900 revolutions, depending on the gear ratio used. These engines are ideal for auxiliary yachts and heavy cruising boats. The reverse gear is of the sliding gear type, with a positive neutral and a 100 per cent reverse. The whole reduction and reverse housing is water cool, as well as the lower base of the engine itself.



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MOTOR BOATING PRACTICAL HAND-BOOKS

Every motor boatman has long felt the need for a really complete and comprehensive library devoted to his favorite pastime—motor boating. One of the obstacles to the accomplishment of this important work was the difficulty in finding any one writer who could cover the field in its entirety. In presenting the new series of practical hand-books, MoToR BoatinG believes that the problem has been solved at last. These books are edited by Charles F. Chapman, M. E., the editor of MoToR BoatinG, and they are the results of months of untiring effort on his part, together with the best of thousands of suggestions sent to him by motor boatmen themselves. The list of the contents given below will give you some idea of the vast amount of ground covered by these volumes.

Practical Motor Boats and Their Equipment

Volume 1.—The first volume tells you what the ideal boat for various kinds of service should be and what to look for in buying a boat. Many suggestions about decoration and hints on all kinds of equipment. All about steering gears, wireless outfit, electrical attachments, etc. Glance over the list of contents appended herewith: Hulls, Ballast and Seaworthiness; Round Bottom vs. Sharp Bilge; What Are the Advantages of Flare; Raised Deck vs. Trunk Cabin; Best Proportion of Beam to Length; Selecting a New Design; The Advantage of Bilge Keels; Open or Solid Deadwood? What Makes a Hull Seaworthy? The \$1,000 Cruiser; Buying a Second-Hand Boat; Types of Bows and Sterns; Exterior Arrangement of Cruisers; The Best Cabin Arrangement; Finishing Up the Cabin; Changes in Interior Arrangement; Interior Arrangement for Open Boat; Propeller-Rudder Arrangements; Best Position for the Rudder; Advantages of the Outboard Rudder; Different Steering Positions; Steering Equipment for Motor Boats; Steering Gear for the Cruiser; The Steering Gear for a Runabout; Steering the Boat from the Side; The Electrical Equipment; Making and Wiring a Switchboard; Electric Lighting on a Motor Boat; The Inexpensive Lighting Outfit; Wiring the Small Cruiser; The Storage Battery; The Dynamo Cut-Out; Wireless for a Small Cruiser; Tender for a Thirty-foot Cruiser; Building a Folding Dinghy; Installing the Boat Boom; What Is the Best Galley Arrangement; Ventilating the Galley; The Galley Stove and Its Installation; Making a Fireless Cooker; a Portable Cook Box; Running Water for the Cruiser; How to Build a Portable Table; A Table for the Open Boat.

Practical Things Motor Boatmen Should Know

Volume 2.—Navigation is one of the important subjects covered in volume three of the series. Tells you how to steer, how to increase the factor of safety, and a host of other things relative to the proper running of your boat. The chart and compass are both fully explained in a clear and comprehensive manner. The list of contents will tell you more about it: Advice for the Beginner, Lessons Learned from Experience; Good Things to Know; Increasing the Factor of Safety; Which Way Should the Boat Steer? Why a Boat Steers Badly; Why Do Boats Squat? Figuring the Boat's Speed; Ballasting the Cruiser; Getting Off Bottom; To Ride Out a Storm in a Motor Boat; The Why and How of Storm Oil; Preventing Fire; Handling Ground Tackle; Government Charts; Stowing the Anchor on a Cruiser; Diminishing Deviation; Preventing Electrolysis; Stowing and Using Charts; How to Make a Chart Case; Keeping a Motor Boat's Log; How to Make a Sextant; Tides and Tidal Water; Taking Her Through the Canals; The Best All Round Dinghy; Towing the Tender; Handling the Dory in a Seaway; Getting the Tender Aboard; Planning for a Cruise; Equipping for a Cruise; Equipment for Offshore Cruising; Novel Events for Regatta Day; Handicapping; The Object of a Handicap Rule; Laying Off a Race Course; Measuring the Length of a Race Course; Preparing a Boat's Bottom for a Race; How to Build a Turning Buoy; Starting Boats in a Race; Stowing the Signal Flag; Fitting a Gun Mount; A Fish Box for Your Cruiser; A Cabin Wall Rack.

Practical Marine Motors

Volume 4.—All about the marine motor; what it should and should not be. Tells why the automobile engine is unsuccessful in marine work. The best location for your engine; the ideal engine bed, the fuel tank, exhaust and countless other suggestions that will enable you to get the best results from your power plant. List of contents: Purchasing a Marine Motor; How Many Cylinders? Power Per Cylinder; High Speed vs. Heavy Duty; Long Stroke vs. Short Stroke; Correct Motor Design; Changes in One's Power Plant; The Things That Cause Vibration; The Automobile Engine for a Boat; The Best Position for the Motor; The Ideal Engine Compartment; Placing the Engine in the Hull; Installing a Motor in a Canoe; Installing Power in a Yawl; Converting a "Banker" to Power Engine Installation in a Hydroplane; Putting Power in the Rowboat; Limits of Shaft Inclination; Constructing the Engine Bed; Getting the Motor Aboard; Lining Up the Propeller Shaft; The Best Exhaust; Mufflers vs. Under-Water Exhausts; Installing an Under-Water Exhaust; Primary Batteries for Ignition; Keeping the Ignition System Dry; Installing a High-Tension Magneto; From Make and Break to Jump Spark; Installing the Gasoline Tanks; Taking Care of Extra Gasoline; Spark and Throttle Controls; Constructing a Rear Starter; Propeller for Engine and Hull; Installing a Universal Joint; Gearing Motor to Propeller Shaft; The Automobile Throttle; Harnessing the Main Engine; Rebabbiting a Worn Bearing; Should Fuel Line Be Inside or Outside?

Practical Motor Operation and Maintenance

Volume 5.—One of the most valuable books of the entire set. Your motor's ills and how to cure them. This volume tells you how to adjust your carburetor, how to fit piston rings, how to remedy poor compression and a number of other things that will enable you to doctor your own motor. List of contents: Locating the Motor's Troubles; The Overheated Motor; Starting in Cold Weather; Overhauling a Marine Motor; How to Save Fuel; The Fuel Situation; Using Low Grade Fuel; How to Run on Kerosene; Supplying the Fuel to the Carburetor; Adjusting the Carburetor; Cleaning the Fuel Tanks; Cleaning the Gasoline Line; Stopping Up the Leak in the Tank; A Home-Made Gasoline Gauge; Carrying an Extra Supply of Oil; Mixing the Fuel and Lubricant; Remedying Leaky Compressions; Killing the Carbon Jinx; Tool and Spare Parts to Carry; Removing and Replacing Piston Rings; Repairing a Leaky Cylinder; Grinding a Motor's Valves; Setting the Valves; Timing the Ignition System; Cleaning the Water Jacket; Making and Fitting a Gasket; Patching Up a Bearing; Straightening the Sprung Shaft; Truing a Bent Propeller; Removing the Flywheel; Separating Couplings and Pipe Fittings; Changing the Shaft Hole Location; Utilizing the Exhaust; Disposing of the Bilge Water; Heating a Small Cruiser's Cabin; Operating the Outboard Motor; The Clean and Quiet Boat; Charging a Storage Battery; When the Motor Stops Unexpectedly; Making a Unit Power Plant.

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Volume 6.—This volume is an especially valuable one. You will find in it points covering the care of your boat that you never dreamed of before. Whether you are a beginner or a finished expert this book will give you a better knowledge of the handling of your craft than you can imagine. List of contents: Putting the Boat Into Commission; Fitting Out a Thirty-Footer; Suggestions for the Beginner; Refinishing Bright Work; Keeping the Wood Surface Bright; Putting the Boat Out of Commission; Laying Up an Unsheltered Boat; Hauling Out for the Winter; Covering the Boat for the Winter; Launching from a Wharf; Correcting Faults; Lengthening Out the Boat; Moorings and Buoys; Taking Steps to Safeguard the Anchor; What to Use in the Bilge; Preserving the Wood in Boats; Emergency Rigs for the Cruiser; Auxiliary Sails for the Cruiser; Providing an Emergency Rudder; Preparing for Southern Waters; Stopping the Troublesome Leak; Replacing a Broken Flank; Removing Broken Lag Screws; Raising the Boat's Stern; Clearing the Propeller; Protecting the Bow and Stern; Open Boat Sleeping Quarters; Ventilating the Cabin of Small Cruisers; Converting the Open Boat to a Cruiser; Making a Cover for the Open Boat; Preventing Electrolysis; Building a Club Float; A Floating Boathouse; Constructing a Landing Stage; Building the Marine; Keeping the Thief Out; A Place for Your Shore Clothes; Stowing for Life Preservers; The Winter's Alterations; What Changes Shall I Make; The Satisfactory Bilge Pump; The Pressure Water System; Making a Pelorus; Your Storm Curtains; Life-Saving Equipment; The Absent Owner's Anchor Light; Mounting the Reverse Gear.

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MoToR BoatinG

119 West 40th Street, New York

Advertising Index will be found on page 146

World's Records to Fall

(Continued from page 19)

tion Gold Cup will be started. At 2:50 the second heat for the One Design Miami Beach boats will be held and at 3:50, the second thirty-mile race for the Gold Cup.

At 4:20 o'clock a special race has been provided for the stock Baby Gars. Five entries have been received for this class and as all of these boats are fifty milers and are of the same design and construction, a close and exciting race is expected.

At 4:45 on Saturday, the third and final heat for the Gold Cup will be started and at 5:45 P.M. a twenty-four mile race for Free-for-All Displacement boats.

Sunday's racing starts off at 10:00 with a three-mile race for boats powered with outboard motors. This race is followed five minutes later when the three A. P. B. A. classes for the Outboard-Motor Championship will be started and at 10:00 o'clock a three-mile race for outboard-motor tenders will be held. At 10:30 there will be a Free-for-All Outboard-Motor race.

At 11:00 o'clock on Sunday, the Truth Race which is open to all boats, irrespective of their speed, size or power will be held. This will be followed up at 12:00 noon, by the first twelve mile heat for the Dodge Memorial Trophy race. Thirty-five minutes later the third heat for the Miami Beach one-design boats will be started, and at 1:20 the second heat for the Dodge Trophy will start.

At 1:50 on Sunday the first heat for the 151 cubic inch Hydroplane class is scheduled. This race is six miles in length.

At 2:00 o'clock the third heat for the Dodge Trophy will start and at 2:50 the second heat for the 151 cubic inch Hydroplanes. At 3:20 the fourth heat for the Dodge Trophy will start and at 3:50 the final heat for the Miami Beach One-Design boats. At 4:30 o'clock, the final event of the Regatta will be held for the famous International Trophy. This race will be 105 miles in length and will be open to both displacement craft and hydroplanes.

A complete synopsis of all the events, with list of entries, etc., follows:

Starting and Racing Instructions

STARTING SIGNALS*

For all classes (excepting the 151 cubic inch hydroplanes).

Each event is numbered as per printed program on page 17.

Ten (10) minutes before the scheduled time for the start of each event, the "event number" printed on a large cube will be hoisted on the Committee Barge. A similar number will also be hoisted from the two Judges Boats at the turns. These cubes will remain hoisted until the starting gun is fired when they will be lowered.

The lowering of the cube will be an indication that the class has started.

Five (5) minutes before the scheduled time of start one gun will be fired from the Committee Barge.

At the scheduled time of start one gun will be fired and a white flag dropped by the starter on the top deck of the Committee Barge. The dropping of the flag is the official start, the gun being used only to call attention to the flag and the gun in no case shall be considered as the official start.

The last minute of time previous to the start will be indicated by the clock on the top deck of the Committee Barge, the hand on the clock indicating approximately the number of seconds remaining before the start of the race.

Should a boat cross the starting line before the time of start she must turn immediately and make a new start. No notice will be given by the Committee to the contestant making an unfair start.

*Special starting signals may be used for Dodge Trophy Race, Events Nos. 14, 15, 17, 19.

INDICATION OF LAPS.

The length of each lap of the race course is 3 statute miles (except Cruiser Races). The length of each heat of each race is shown on page 17. The lap number which the boat that is leading the race is on at any particular time, will be shown by the "Lap Indicator" located on the top deck of the Committee Barge. This will indicate which lap the leading boat is on or starting, not the laps completed. The lap numbers will show only the position of the boat leading.

BEGINNING OF LAST LAP.

The beginning of the last lap will be indicated by the starter showing a green flag from the top deck of the Committee Barge.

FINISH OF RACE.

One gun will indicate the finish of the race.

A blue shape will be hoisted at the finish of the race on the Committee Barge and on the two judges boats.

A checkered flag will also be shown to contestants at the finish.

ALL COMPETING BOATS LEAVE COURSE WHEN FIRST BOAT HAS FINISHED

When the first boat has finished a blue shape will be hoisted and a checkered flag shown. This is the signal for competing boats to finish the lap they are on at the time the first boat finishes (providing they are underway). They will receive credit for this position. Boats disabled or not underway when the first boat finishes will be credited with laps and fractions thereof which they have completed when the first boat finishes.

All competing boats must immediately leave the race course (upon completing the lap they are on) when the first boat has finished. They may not continue on the course to finish their requisite number of laps or to complete the entire length of the heat. Disabled boats will be towed off the course after the first boat has finished.

POSTPONEMENT

A red shape hoisted on the Committee Barge will be the signal for postponement. All contestants should report to the Committee Barge immediately for instructions. The "event number" on a cube will be hoisted just below the red shape to indicate which event is postponed.

WHITE SHAPE

A white shape hoisted on the Committee Barge with a cube showing an "event number" will be a signal for all contestants in that event to report to the Committee Barge for instructions.

START AND FINISH LINE

The start and finish line will be established in an easterly direction from the Committee Barge and the outer end of the line will be suitably marked.

DIRECTION OF START

All starts shall be made in a northerly direction between the Committee Barge and the mark marking the easterly end of the starting line.

DIRECTION OF FINISH

All finishes shall be made in a northerly direction between the Committee Barge and the mark marking the easterly end of the starting line.

PASSING TURNING BUOYS

The main turning buoys at each end of the straightaway course shall be left on the port hand.

PASSING COMMITTEE BARGE

Boats running north shall pass to the east of the Committee Barge and boats running south shall pass to the west of the Committee Barge.

STARTING SIGNALS FOR 151 CUBIC INCH HYDROPLANE CLASS

Red flag shown from judges' stand is signal for boats to approach starting line at two-thirds full speed, with pole boat as guide boat.

White flag indicates "go."

Red flag indicates false start. Boats must return to point behind starting line, not approach starting line until yellow flag is shown by judges. Boats must remain astern of "pole" boat.

Green flag indicates beginning of last lap.

Checkered flag, finish.

SCORING HEAT RACES

The scoring in matches consisting of two or more heats or races shall be as follows (except 151 Cubic Inch Hydroplane Class).

The winner of the match shall be determined by the point system, whereby each boat starting and finishing a race of a match will receive as many points as is indicated in the following table:

Points	Points
First boat to finish..... 400	Eleventh boat to finish..... 100
Second boat to finish..... 361	Twelfth boat to finish..... 81
Third boat to finish..... 324	Thirteenth boat to finish..... 64
Fourth boat to finish..... 289	Fourteenth boat to finish..... 49
Fifth boat to finish..... 256	Fifteenth boat to finish..... 36
Sixth boat to finish..... 225	Sixteenth boat to finish..... 25
Seventh boat to finish..... 196	Seventeenth boat to finish..... 16
Eighth boat to finish..... 169	Eighteenth boat to finish..... 9
Ninth boat to finish..... 144	Nineteenth boat to finish..... 4
Tenth boat to finish..... 121	Twentieth boat to finish..... 1

In case two or more boats have scored the same number of points for the series, thus establishing a tie, the match shall be awarded to that one of the tied boats which has covered the course in the least total elapsed time for the series.

PRESENTATION OF PRIZES

Winners of prizes are invited to a Winner's Dinner to be held at the Manhasset Bay Yacht Club, Monday evening, August 31, when prizes won will be presented. Prizes will be sent to those winners unable to attend the Winner's Dinner.

ENTERTAINMENTS

All yacht clubs on Manhasset Bay and vicinity have extended an invitation to all visiting yachtsmen and ladies to make use of their club facilities during the Regatta. Special functions, as follows, are planned, to which all visiting yachtsmen and ladies are invited:

- Thursday evening—Dinner Dance, Sands Point Casino.
- Friday evening—Dinner Dance, Manhasset Bay Yacht Club. Stag Dinner, Columbia Yacht Club.
- Saturday evening—Dinner Dances, All Yacht Clubs. Fire Works, Port Washington.

ANCHORAGE OF SPECTATOR BOATS

No boat will be allowed to anchor closer to the Race Course than 600 feet from the center line of the Race Course on either side or end. These boundary lines will be marked by white spar buoys, numbered from 1 to 28 inclusive, anchored 750 feet apart. These buoys will be anchored with moorings weighing 1800 pounds each.

HELP TO KEEP COURSE CLEAR

Visiting yachtsmen are requested not to throw any floating refuse or bottles overboard as the smallest object may cause serious injury to the race boats. It is further requested that any floating object seen in the water be picked up.

RUN SLOW

The slightest wave or wash from a boat underway is objectionable and often dangerous. Please run slow, not over 3 miles an hour, when underway in Manhasset Bay during the Regatta, whether the races are actually being run or not.

DRIVERS AND CONTESTANTS MEETING

All drivers and contestants must attend a meeting to be held at the Purdy Boat Company, Saturday morning, at ten o'clock.

HOW TO GET TO MANHASSET BAY

Manhasset Bay is located at the western end of Long Island Sound, near the entrance to the East River and twenty-two miles from the Battery, New York City. It is on the north shore of Long Island, directly opposite City Island and New Rochelle.

Manhasset Bay is about three miles long and about two miles wide at its widest part. Plum Point, at the entrance, makes the Bay almost land locked and thus ideal water for high speed motor boat racing. There is deep water everywhere in the bay and no rocks. The bottom is mud and sand and therefore a good holding bottom.

The town of Port Washington is located on the east bank of Manhasset Bay. Port Washington is reached via the Long Island Railroad from Pennsylvania Station, New York City, by through electric trains leaving New York at frequent intervals. The running time is about 45 minutes. Port Washington may also be reached over excellent automobile roads via 59th Street, Manhattan and the Queensboro Bridge. The distance is twenty miles.

Three fine yacht clubs—the Manhasset Bay, Knickerbocker and Port Washington—are located at Port Washington. All of these clubs have facilities for taking care of visiting yachtsmen.

Gasoline may be had from several stations located in the bay and supplies and provisions are easily obtainable from stores located close to the Public Dock at Port Washington.

Shipyard and marine repair facilities may be found in great abundance both at Port Washington and at City Island, two miles distance.

BUS SERVICE

Motor busses will be operated at frequent intervals between

the Hotel Belmont, New York City, and the Race Course at Port Washington, L. I.

ACCOMMODATIONS FOR SPECTATORS

Accommodations for 2,000 spectators have been provided aboard floating grandstands to be anchored directly on the Race Course at the finish line. For tickets apply to Ira Hand, 29 West 39th Street, N. Y. C. (Longacre 0016), or Henry Clay Foster, Gold Cup Headquarters, Hotel Belmont, New York City.

Event No. 1

James Craig Trophy Race for Cruisers

Date: Aug. 26-27, 1925.

Course: Philadelphia, Pa., to Manhasset Bay.

Distance: About 250 miles.

Open to "Cruisers" (under 8½ knots speed in race) and "Fast Cruisers" (speed 8½-12 knots in race).

Class A: Cruisers 30' to 60', Waterline Length.

Class B: Cruisers 60' to 90', Waterline Length.

COURSE:

The course for this race will lie between the Club house of the Riverside Yacht Club, Essington, Pa., and a committee boat anchored in Manhasset Bay, Long Island, a distance of about 240 miles. Government aids to navigation need not be observed.

START AND FINISH LINES:

Off the Riverside Yacht Club, Essington, Pa., to a stake boat in Manhasset Bay.

PRIZES:

The boats in Class A making the best corrected time, considering all boats to be sailing in one class, will be awarded the James Craig Trophy, in accordance with the terms of the Deed of Gift governing this trophy. A valuable first prize, offered by the Riverside Yacht Club, will also be presented to become the property of the owner of the boat in Class A making the best corrected time for all boats sailing in one class. A valuable first prize will also be presented to the boat in Class B making the best corrected time.

Second prizes will be presented in each class, if a total of five boats start. If there are no starters in Class B, prizes offered for this class will be distributed to Class A. A time prize will be presented to the boat making the best elapsed time over the course.

Completion prizes: Charms, suitably engraved, will be presented to each captain and every member of the crew, on all boats finishing the race.

Event No. 1A

The Tri-State Yacht Club will hold their First Annual Ocean Race from Essington, Pa., to the Columbia Yacht Club in New York City on August 24, 1925.

The race will be conducted under the 1924 A. P. B. A. rules and all competing boats should report at the Club on Sunday, August 23, where an official A. P. B. A. measurer will be present to rate and check up the ratings of all competing boats. Arrangements have been made at Atlantic City for Express Cruisers to refill their tanks with gasoline where an official will be present to check out the time consumed in refilling. No time will be allowed for repairs.

Tuesday evening, August 25, at the Columbia Yacht Club, the crews of all contesting boats will be entertained.

Wednesday, August 26, the boats will proceed by way of the Harlem River to Manhasset Bay, Long Island Sound, where desirable anchorages to witness the Gold Cup Regatta will be assigned. Owners of boats desiring to witness or participate in The Express Cruiser Championship of America, can continue on to the Sachem's Head, Conn.

A first, second and time prize will be awarded in each of the following classes:

- Cruisers Rating under 38
- Cruisers Rating 38 and over
- Express Cruisers

All boats not winning one of these prizes will receive a prize for finishing and all boats starting but not finishing will receive a consolation prize.

In addition to the above prizes there will be awarded to the winning boat on handicap, regardless of class, the James H. Kerr prize of \$1,000 cash.

Event No. 2

Handicap Express Cruiser Championship of America

Date: Aug. 27-28, 1925.

Course: Sachem's Head, Connecticut to Manhasset Bay.
Distance: About 115 miles.

Open to Express Cruisers (speed, 16-22 knots in race) of not less than thirty (30) nor more than sixty (60) feet water line length, powered with American marine motors, handicapped according to 1925 A. P. B. A. racing rules; winner to hold Express Cruiser Trophy for one year or until next race. Trophy now held by Harpoon, Middletown (Conn.), Yacht Club.

The Express Cruiser Championship of America will be run in two heats as follows: Total distance, 91 nautical or 105 statute miles.

First Heat—Thursday, August 27th.

Course from: Starting line between Sachem's Head Yacht Club and Stake Boat anchored due south of clubhouse.

To and Around Red Gas and Bell No. "8," off the mouth of the Connecticut River at Saybrook, Conn.

Finish line: Return to starting line. Distance, 36 nautical or 41½ statute miles.

Time of Start (Daylight Saving Time). Warning signal, 3:55 P. M.; flying start, 4:00 P. M.

Second Heat—Friday, August 28th.

Course from: Starting line off Sachem's Head. On port hand—Black Bell No. 23, off Sands and Barker Points.

To Finish Line: On Gold Cup Course, Manhasset Bay. Distance, 55 nautical or 63½ statute miles.

Time of Start (Daylight Saving Time). Warning signal, 12:55 P. M.; start, 1:00 P. M.

Time Allowance: A. P. B. A. Tables.

Events: The Express Cruiser Championship of America—Two heats for National Association Trophy. Limited by deed of gift to boats rating as Express Cruisers under A. P. B. A. Rules and powered with stock marine engines of American design and manufacture.

The Express Cruiser Free-for-All—Two heats for the Middletown Yacht Club Trophy. No limitations as to power plant or rating.

The Sachem's Head Yacht Club Open Handicap for Express Cruisers—For the Sachem's Head Yacht Club Trophy. First Heat of National Event. No limitations as to power plant or rating.

The Express Cruiser Championship of Long Island Sound—For Gold Cup Regatta Trophy. Second Heat of National Event. Open to all cruisers with qualifying speed of sixteen knots.

Prizes:

The National Association of Engine and Boat Manufacturers' Trophy emblematic of the Express Cruiser Championship of America.

The Middletown Yacht Club Trophy for the Express Cruiser Free-for-all.

The Sachem's Head Yacht Club Trophy for the S. H. Y. C. Express Cruiser Handicap.

The Gold Cup Regatta Trophy for the Express Cruiser Championship of Long Island Sound.

A second prize in all events in which five boats start.

A third prize in all events in which seven boats start.

An A. P. B. A. record certificate for the best corrected time.

Event No. 3

Handicap Cruiser Championship of America

Date: Aug. 28, 1925.

Time: 9 A. M.

Course: Manhasset Bay to and around Stratford Shoal light and return to Manhasset Bay.

Distance: 68 nautical miles.

Open to Cruisers (speed, under 8½ knots in race) and Fast Cruisers (speed, 8½-12 knots in race) of not less than thirty (30) nor more than forty-five (45) feet waterline length, handicapped according to the 1925 American Power Boat Association racing rules; winner to hold Cruiser Championship Trophy for one year or until next race. Trophy now held by Nueva.

Complete rules follow:

COURSE

The course lays from Committee boat anchored in Manhasset Bay to and around red spar buoy No. 2 moored just south of Stratford Shoal light, Long Island Sound, leaving same on starboard hand and return to starting point, a distance of approximately 68 nautical miles. Buoys off Plum Point and Barkers' Point and the Sands Point light must be passed on the channel side.

START AND FINISH LINES

The start and finish lines will be established between the Gold Cup Committee boat anchored in Manhasset Bay and a mark established approximately 200 yards west. Boats will start in a northerly direction and finish in a southerly direction.

STARTING SIGNALS AND TIME OF START

Warning gun, 8:50 A. M., Daylight Saving Time.

Preparatory gun, 8:55 A. M., Daylight Saving Time.

Starting gun, 9:00 A. M., Daylight Saving Time.

PRIZES

The New York Athletic Club trophy emblematic of the American Power Boat Association Handicap Cruiser Championship of America will be presented to the club which the winning boat represents. This trophy to be held for one year or until next race.

In addition the New York Athletic Club will present a valuable permanent prize to the owner of the winning boat, as well as a second prize if five boats start. Third and fourth prizes will also be given if seven and ten boats, respectively, start. A time prize will be presented to the boat making the best actual time, and an American Power Boat Association record certificate will be presented to the owner of the boat making the best corrected time.

Event No. 3A

Handicap Cruiser Championship of Greater New York

Course: From the starting line in Manhasset Bay to and around Stratford Shoal Light and return to Manhasset Bay. The course lays from the Committee boat, anchored in Manhasset Bay to and around Red Spar Buoy No. 2, moored just south of Stratford Shoal Light, Long Island Sound, leaving same on starboard hand and return to starting point, a distance of approximately 68 nautical miles. Buoys off Plum Point and Barkers' Point and the Sands Point Light must be passed on the channel side.

Date: August 28, 1925.

Time: 9:10 A. M.

Distance: 68 nautical miles.

Open to Cruisers and Fast Cruisers (speed under 12 knots in race) of not less than thirty (30) nor more than forty-five (45) feet waterline length, handicapped according to the 1925 American Power Boat Association racing rules. Boats holding any American Power Boat Association Championship titles are not eligible for this race.

Start and Finish Lines:

The start and finish lines will be established between the Gold Cup Committee boat anchored in Manhasset Bay and a mark established approximately 200 yards west. Boats will start in a northerly direction and finish in a southerly direction.

Prizes:

First Prize: A fifty-five piece dinner set decorated with the owner's private signal and his club flag. Also 1925 Championship pennant.

Second Prize: Suitable trophy.

Third Prize: Suitable trophy.

Time Prize: Suitable trophy.

Event No. 4A

One-Mile Championship Trophy

Date: August 28, 1925.

Course: One mile, straightaway on Manhasset Bay to be run six times in consecutive runs.

Open without restrictions, to all types of boats, irrespective of power plant, piston displacement, type of underbody.

The match will consist of six trials of each contestant over a straightaway course of 5,280 feet in length. Starts will be "flying," and the time will be taken as the stem of the boat crosses the line. Three trials will be made in one direction and three in the opposite direction. Each contesting boat will run six times over the course by herself in such order as shall be determined by the drawing of lots. A boat starting a trial must finish all six runs without leaving the course.

The winner of the match will be the boat making the fastest time for six trials provided, however, that unless the average speed is greater than the existing American Power Boat Association record for one-mile (80.567) the cup shall remain in the possession of the challenged club (the Detroit Yacht Club).

Averages of the mile runs are to be computed under admiralty conditions. The boat, engine and accessories must be manufactured in the United States or Canada.

Events Nos. 4, 6, 20, 22

Miami Beach One-Design Class

Date: Saturday and Sunday, August 29th and 30th.

Time: 1st Heat—1:15 P.M. Saturday, August 29th.
2nd Heat—2:50 P.M. Saturday, August 29th.
3rd Heat—12:35 P.M. Sunday, August 30th.
4th Heat—3:50 P.M. Sunday, August 30th.

Distance: Each Heat, 12 Miles.

Course: Each Heat, 4 times around Gold Cup Course.

This race is open to the boats of the Miami Beach one-design class, designed and built by the Purdy Boat Company and powered with 6-cylinder Scripps motors. The boats of this class will be driven by amateurs.

The entries are as follows:

Entries for Miami Beach One Design Class Events 4, 6, 20 and 21			
Racing No.	Owner	Driver	
12	Tatum Brothers	H. Paul Prigg	
13	Miami Shore	Geo. McK Brown	
14	Altos Del Mar	Robert Breeze	
15	Miami Riveria	John Rutherford	
16	Curtiss Bright	Richard F. Hoyt	
17	Venetian Islands	Comm. Robt. Gamble	
18	Key Largo	Nelson Doubleday	
19		F. P. Currier	
20	Coral Gables	Ray Haroun	
21	Fulford-By-the-Sea	John Fell	

Events Nos. 5, 7 and 9

A. P. B. A. Championship of America for Gold Cup

Date: Aug. 29, 1925.

Time: 1st heat 2:00 P. M.
2nd heat 3:30 P. M.
3rd heat 4:45 P. M.

Distance: Three heats of thirty (30) miles each around a three-mile course.

Course: Each heat ten times around three-mile Gold Cup Course.

This race is open to displacement craft of over twenty-five (25) feet in water line length, powered with motors not exceeding 625 cubic inches piston displacement.

The winner of this race shall be awarded the Gold Challenge Cup for one year or until the next race.

There is no limit to the number of challenges from any individual or any club. The winner is determined by the point system and the boat, engine and accessories must be manufactured in the United States or Canada. Boats must be equipped with an efficient reverse gear, self-starter, full equipment, and shall not be equipped with a gear box.

The hulls of competing boats must have no breaks in the longitudinal continuity of the immersed surface, not more than one lifting surface and must conform to the committee's idea of what is generally classed as a Displacement type. The keel and chine (or bilge) must be continuous and must extend from the bow to the stern or (stern post). Steps, either transverse or longitudinal, will not be permitted. Surfaces on each side of the keel line between the keel and the chine (or bilge) must be continuous and not contain breaks, jogs or

notches of any description. There shall be no movable plates, hinged devices, adjustable steps or planes on the bottom of the boat and no catamaran type of construction. The chines must not project below the horizontal level where the planking joins the keel at any point in the same cross section of the hull. Not more than six bilge bailers or breathers will be permitted; they may be placed in any desired location on the bottom of the boat, but each bailer must be limited to not more than four square inches opening inside the orifice and no outside portion of the bailer may project outside of a rectangle five inches wide by eight inches long when the eight inch dimension is placed parallel to the center line of the keel. The decks must be strong enough to safely carry the weight of two men and thick enough to hold all fixtures and fittings securely. The entire construction must be strong, durable, seaworthy and safely manageable. Boats must carry the full equipment required by the steamboat inspection laws. Boats must finish with full structural and other equipment required by the rules that she started with, except fuel and oil. Should anything fall overboard, same must be retrieved from water or replaced at pits or place designated by the Race Committee on next lap after detection by crew or flag from judges, otherwise the boat will be subject to disqualification or loss of laps run after detection or being flagged. In case of damage or loss due to collision with or fouling boat in the race or hitting a floating or submerged object, the boat may continue in the race without repairs or replacements at the discretion of the owner and the judges, provided injured boat has not violated rules.

Note: Sea Sled model acceptable.

The total maximum displacement of the motor in boats competing for this Trophy shall not be more than 625 cubic inches.

Boats competing for this Trophy shall have a waterline length of not less than 25 feet.

Boats competing for this Trophy shall have a waterline beam at their widest section not less than 5 feet. Boats built with the so-called overhang stern must be so constructed that no part of the overhang proper (excepting rudder, etc.) comes nearer than one inch to the surface of the water when the boat is at rest in still water in racing trim.

Competing boats must exhaust at or near the stern or stern transom above water when under way.

Competing boats must be fitted with at least one watertight compartment in bow extending approximately five feet aft from stem, have the motor compartment entirely closed in, and have seating accommodations for at least four persons. Hatch covers must remain closed while the boat is under way, except when momentarily opened for inspection or necessary adjustment of the motor.

No postponements from the advertised time of start of the race shall be allowed for any cause, except in the interests of Public Safety.

Competing boats shall be equipped with an efficient reverse gear. And be equipped with an efficient self-starter of a type capable of turning over motor. Permission to start by other means may be obtained from the Race Committee.

Competing boats must carry full equipment in the race, including floor boards, seating equipment for four persons, etc.

A competing boat shall not be equipped with a gear box. Gear boxes will be interpreted to mean not only gear boxes with a step-up gear ratio, but gear boxes with a one to one ratio, and any form of device to increase or decrease propeller speed above or below engine speed.

The propeller shaft must be in line or nearly in line with the crank shaft and rotate at exactly the same speed, and the function of any reverse gear or clutch used shall not be different from the ordinary use of a reverse gear, that is, to reverse direction of the rotation of the propeller or for the purpose of idling. In other words, no device for Stepping-up propeller speed shall be included in the reverse gear or any other form of gear box.

The entries are as follows:

Events for Gold Cup Class. Events 5, 7 and 9			
Racing No.	Name of Boat	Club	Owner
G-1	Miss Columbia	Columbia Yacht Club	Miss Columbia Syndicate
G-2	Miss Mary	Buffalo Launch Club	E. J. Grimm
G-5	Baby Bootlegger	Columbia Yacht Club	C. S. Bragg
G-6	Runnin' Wild	Columbia Yacht Club	C. S. Bragg
G-7	Baby Shadow	Miami Bach	C. G. Fisher
G-8	Miss Motometer	Indian Harbor Y. C.	Geo. Townsend
G-9	Nuisance	Columbia Yacht Club	Mrs. Delphine Dodge
G-10	Miss Tampa	Davis Islands Y. C.	Dodge Cromwell
G-31	Solar Plexus	Detroit Yacht Club	D. P. Davis
G-32	Baby America II	Detroit Yacht Club	Horace E. Dodge
G-33	Impshi	Dodge Dealer's Ass'n.	Gar Wood
			Dodge Dealer's Association
G-57	Curtis-Wilgoid II	Buffalo Launch Club	R. V. Williams

Event No. 13

Truth Race

Date: Sunday, Aug. 30, 1925.

Time: 11 A. M.

Distance: Not over ten miles.

Course: In Manhasset Bay, exact location to be announced before start of race.

This race is open without restrictions to all types of motor boats. Displacement, hydroplanes, cruisers, outboard motor boats, etc. The length of the course for this race will be unknown to any but the Committee. The course will be announced from the Committee boat, fifteen minutes before the start of the race.

Previous to the race, the owner of each boat will declare the maximum speed of his boat and after the race the boat which has finished the race in the speed nearest to its declared speed will be the winner.

An invitation is extended to all yachtsmen to enter their craft in this race.

Prizes will be awarded for first, second, third, fourth and fifth place.

Entries close 9 A. M. on Sunday, August 30, and must be made with the Committee aboard the Committee boat.

Entries must be accompanied with a statement of the maximum speed of boat in miles per hour, signed by the owner or his representative.

Boats must report to the Committee Barge at 10:40 A. M. for Course Instructions.

Boats must carry a racing number, which will be furnished by the Race Committee at the Judge's Barge at 10:40 A. M. Racing numbers must be returned after the finish.

Events Nos. 11, 23, 24, 25

Outboard Motor Championships

Date: August 30th, 1925.

Distance: 3 miles.

Course: Each race, once around Gold Cup Course.

Time: 10:00 a.m. Manufacturers' (Speedster) Class. Event No. 23.

10:05 a.m. Class A. Under 12 cubic in. Event No. 11.

10:05 a.m. Class B. 12 to 17 cubic in. Event No. 11.

10:05 a.m. Class C. Over 17 cubic in. Event No. 11.

10:10 a.m. Outboard-Motor Tenders. Event No. 24.

10:30 a.m. Unrestricted Class. Event No. 25.

Rules for Event No. 11

The races will be run in accordance with the general rules and regulations of the American Power Boat Association, except as otherwise pointed out. Motors will be divided into three classes, namely: (a) Under 12 cubic inches piston displacement; (b) 12 to 17 cubic inches, and, (c) over 17 cubic inches; with an award for first place in each class, but the three classes will be started together.

Boats must be at least 14 feet in length. There will be no other restriction on hulls, except that canoes are excluded—and, of course, the Committee may exclude any boat it deems unsafe either in itself or to other boats. By canoe is understood only the usual double-ended paddling or sailing canoe, and the term does not exclude a boat of canoe construction on which the transom makes a definite angle to the sides and bottom where it joins them.

Any make of outboard motor may be used, but not more than one motor can be used to operate one boat. The motor must be a stock motor with no changes in the size of parts. Any parts can be removed, but no parts or attachments shall be added to the stock motor.

Only ordinary commercial gasoline and oil shall be put in the tanks of the motors. The Committee will furnish these supplies to contestants when they report at the course one hour before the race. The cost will be deducted from the entry fee and the balance returned at that time to each contestant that reported.

Nobody under 15 years of age shall be allowed in a boat during the contest. Each boat must carry two persons, both of whom must be amateurs. Both members of the crew must be plainly visible to the Race Committee at all times. Every competing boat must carry a pair of oars, a hand fire-extinguisher, and life preservers will be worn by each of the crew. Boats 18 feet or over must carry full motor boat equipment.

There is no restriction on entrant in regard to club membership. The term amateur means simply one who is interested in boats and motors for sport and not for gain.

Rules for Event No. 23

The Speedster Race (start 10:00 A.M.), is a factory event in which the various outboard motors, of the makes advertised as 3 H.P. or under, are used on identical boats with identical loads. The engine manufacturers were unanimous (first time in history) in their choice of the Meraco Speedster for this event, and the builders of the boat, The St. Louis Meramec Canoe Co., reciprocated by placing the necessary boats at the disposal of the Race Committee.

The unlimited outboard event is intended to bring out new motors and new speeds and is without restriction of any sort.

Event No. 24

The conditions for the race for tenders (start 10:10 A.M.) are the same as for Event No. 11, except in regard to the character of the boats and the limitation of the size of the boats.

The Edward Fell Jardine Co. has offered as a prize to the tender making the best time an exchange of the winning boat for a new nine-foot tender.

Event No. 8

Baby Gar Invitation Race

Date: Saturday, Aug. 29, 1925.

Time: 4:20 P. M.

Distance: Twelve miles.

Course: Four times around regular three-mile Gold Cup Course.

This race is open to displacement runabouts of the so-called Baby Gar type of about 32 feet in length, powered with one stock Liberty motor of 1650 cubic inches, piston displacement.

There are no restrictions other than that the boat must be a stock Baby Gar runabout powered with a stock Liberty motor employing ordinary fuel.

The entries are as follows:

Entries For Baby Gar Invitations. Event No. 8

Racing No.	Name of Boat	Club	Owner
T-20	Baby Cub	Columbia Yacht Club	Howard W. Lyon
T-21	Casey Jones	Columbia Yacht Club	Caleb S. Bragg
T-24	Kroywen	Columbia Yacht Club	Wm. Ottmann
T-25	Bebe	New Rochelle Y. C.	S. A. Lynch, Jr.
T-26	Jazz		Harvey D. Gibson

Event No. 10

Free-for-All Displacement Runabout Race

Date: Saturday, Aug. 29, 1925.

Time: 5:45 P. M.

Distance: Twenty-four miles.

Course: Eight times around regular three-mile Gold Cup Course.

This race is open to displacement runabouts of all sizes and powers without any restriction whatsoever as to piston displacement, power plant, etc.

Gold Cup definition of displacement boat applies in this race.

The entries follow:

Entries For Free-For-All Displacement Runabout Race. Event No. 10			
Racing No.	Name of Boat	Club	Owner
G-1	Miss Columbia	Columbia Yacht Club	Miss Columbia Syndicate
G-2	Miss Mary	Buffalo Launch Club	E. L. Grimm
G-5	Baby Belgr.	Columbia Yacht Club	C. S. Bragg
G-6	Runnin' Wild	Columbia Yacht Club	C. S. Bragg
G-7	Baby Shadow	Miami Beach	C. G. Fisher
G-8	Miss Moto Meter	Indian Harbor Yacht Club	Geo. Townsend
G-9	Nuisance	Columbia Yacht Club	Mrs. Delphine Dodge Cromwell
G-10	Miss Tampa	Davis Islands Yacht Club	D. P. Davis
G-31	Solar Plexus	Detroit Yacht Club	Horace E. Dodge
G-32	Baby Am. II	Detroit Yacht Club	Gar. Wood
G-33	Impshi	Dodge Dealers' Assn.	Dodge Dealers' Assn.
G-57	Curtiss-Wilgld II	Buffalo Launch Club	R. V. Williams
T-20	Baby Cub	Columbia Yacht Club	Howard W. Lyon
T-21	Casey Jones	Columbia Yacht Club	C. S. Bragg
T-24	Kroywen	Columbia Yacht Club	Wm. Ottmann
T-25	Bebe	New Rochelle Y. C.	S. A. Lynch, Jr.
T-26	Jazz	Columbia Yacht Club	Harvey D. Gibson
T-27	Awful Aug	Columbia Yacht Club	G. M. Heckscher
T-28	Bobbie	Columbia Yacht Club	N. B. Woolworth
T-29	Krazy Kat	Huntington Bay Club	R. B. Honeyman
T-30	Starling	Red Bank Yacht Club	P. A. Proal
T-55	Cigarette, Jr.	Columbia Yacht Club	L. G. Hamersley
T-60	Miss Palm Beach	Buffalo Launch Club	W. J. Connors
D-1	Miss Syndicate	Dodge Dealer's Assn.	Dodge Dealer's Association

Events Nos. 16 and 18

Hydroplane Race for the 151 Cubic Inch Class

Date: Sunday, Aug. 30, 1925.

Time: First heat—1:50 P. M.;

Secod Heat—2:50 P. M.

Distance: Two heats of six miles each.

Course: Each heat twice around regular three-mile Gold Cup Course.

This race is open to hydroplanes powered with motors of not over 151 cubic inches piston displacement, complying with the Mississippi Valley Power Boat Association rules for this class.

Racing rules of the Mississippi Valley Power Boat Association will be used in this race.

The entries follow:

Entries for Hydroplane Race for 151 Cubic Inch Class Events Nos. 16 and 18			
Racing No.	Name of Boat	Owner	
B-2	Miss Meadowmere	Frank Ripp	
B-4	Comet	Roland Bergh	
B-6	Miss Quincy VII	Chris Ripp	
B-7	Hadley-Plane	Clifford S. Hadley	
B-8	Greased Lightning	Wm McP. Bigelow	
B-10	Kotick	Geo. W. Helme	
B-13	Miss New York	Robt. K. MacLea	
B-20	E-Nee-Mo	Joseph Clayton	
B-30	Miss Broad Channel	Broad Channel Y. C.	
B-31	Miss Westchester	E. W. Hammond	
B-36	Baby Skipjack	Geo. Graves	
B-38	Little Star	Waugh Bros.	
B-39	Blue Devil	Otto Stoye	
B-40	Miss Quincy VIII	Clifford E. Padgett	
B-41	O Boy	Antonio Lambiasi	

Event No. 21

International Trophy

Date: Sunday, Aug. 30, 1925.

Time: 4:30 P. M.

Distance: One heat of 105 miles.

Course: Thirty-five times around regular three-mile Gold Cup Course.

This race is for the Development Class and is open

to all craft, displacement or hydroplane, with no restrictions as to hull, bottom, or power plant, except that piston displacement must not exceed length cubed, divided by 19.

The entries follow:

Entries for International Trophy Event No. 21			
Racing No.	Name of Boat	Club	Owner
G-1	Miss Columbia	Columbia Yacht Club	Miss Columbia Syndicate
G-2	Miss Mary	Buffalo Launch Club	E. L. Grimm
G-5	Baby Bootlegger	Columbia Yacht Club	C. S. Bragg
G-6	Runnin' Wild	Columbia Yacht Club	C. S. Bragg
G-7	Baby Shadow	Miami Beach	C. G. Fisher
G-8	Miss Moto Meter	Indian Harbor Y. C.	Geo. Townsend
G-9	Nuisance	Columbia Yacht Club	Mrs. Delphine Dodge Cromwell
G-10	Miss Tampa	Davis Islands Y. C.	D. P. Davis
G-31	Solar Plexus	Detroit Yacht Club	Horace E. Dodge
G-32	Baby America II	Detroit Yacht Club	Gar. Wood
G-33	Impshi	Dodge Dealers' Assoc.	Dodge Dealers' Assn.
G-57	Curtiss-Wilgld II	Buffalo Launch Club	R. V. Williams
T-20	Baby Cub	Columbia Yacht Club	Howard W. Lyon
T-21	Casey Jones	Columbia Yacht Club	C. S. Bragg
T-24	Kroywen	Columbia Yacht Club	Wm. Ottmann
T-25	Bebe	New Rochelle Y. C.	S. A. Lynch, Jr.
T-26	Jazz	Columbia Yacht Club	Harvey D. Gibson
T-27	Awful Aug	Columbia Yacht Club	G. M. Heckscher
T-28	Bobbie	Columbia Yacht Club	N. B. Woolworth
T-29	Krazy Kat	Huntington Bay Club	R. B. Honeyman
T-30	Starling	Red Bank Yacht Club	P. A. Proal
T-55	Cigarette, Jr.	Columbia Yacht Club	L. G. Hamersley
T-60	Miss Palm Beach	Buffalo Launch Club	W. J. Connors
D-1	Miss Syndicate	Dodge Dealers' Assoc.	Dodge Dealers' Assn.

Event No. 12

Aquaplane Race

Date: Sunday, August 30, 1925.

Time: 10:35 A. M.

Distance: One-half mile.

Course: One-half mile straightaway finishing in abeam of Committee boat.

This race is open to aquaplanes, without restrictions. Aquaplanes may be towed by any type of boat and the usual rules of the road and racing rules will apply.

Contestants will compete against each other unless the number of entries require several heats, in which event they will race against time.

The contestants will mount their boards 100 yards from the starting mark, the boats being so spaced that the wash of the competing boats will not interfere with the riders.

The pacemaker will pace the boats to the starting point, endeavoring to cross the starting line at approximately 20 miles an hour. He must, however, regulate his speed to keep the boats abreast and properly spaced until all riders are on the boards.

The pacemaker will carry a raised flag which will be dropped when he crosses the starting line. This will be the signal for the boats to open up and will also serve as a signal for the timers to take the starting time of the heat.

The finish will be the regular finishing line.

The time will be taken when the boat and not the rider crosses the starting and finishing lines. However, the rider must be standing on the board throughout the race, otherwise his time will not be counted.

This race is a free-for-all, there is no restriction upon the boats, the boards or the riders. The Committee will endeavor to give any rider desiring it an opportunity to ride behind the fastest boat entered in the race. Each rider will be entitled to two trials but may be extended a third trial at the discretion of the Committee.

Events Nos. 14, 15, 17 and 19

Dodge Memorial Trophy for Inter-Class

Championship

Prizes for Gold Cup Regatta

Date: Sunday, August 30, 1925.

Time:

First Heat—12:00 noon.

Third Heat—2:20 P. M.

Second Heat—1:20 P. M.

Fourth Heat—3:20 P. M.

Distance: Four or more heats of twelve miles each.

Course: Each heat, 4 times around regular 3-mile Gold Cup course.

This race is open to displacement craft whose piston displacement does not exceed the boat's length cubed divided by 25. The boat which first wins four heats will be awarded the Dodge Memorial Trophy for one year or until the next race is held.

In the race for the Dodge Memorial Trophy there is no limit to the maximum or minimum length of hull, provided the piston displacement does not exceed length cubed, divided by 25. Boats of the displacement type only are permitted, without gear boxes. The water line beam at the widest section must not be less than the square root of the water line length. The rules for the A. P. B. A. Gold Cup as regards type of underbody, watertight compartments, hatch covers, exhausts, reverse gear, self-starter, helmsman,

equipment, superchargers, etc., will apply also in the Dodge Trophy Race.

Entries for Dodge Memorial Trophy Events 14, 15, 17 and 19

Racing No.	Name of Boat	Club	Owner
G-1	Miss Columbia	Columbia Yacht Club	Miss Columbia Syn.
G-2	Miss Mary	Buffalo Launch Club	E. L. Grimm
G-5	Baby Bootlegger	Columbia Yacht Club	C. S. Bragg
G-6	Runnin' Wild	Columbia Yacht Club	C. S. Bragg
G-7	Baby Shadow	Miami Beach	C. G. Fisher
G-8	Miss Moto Meter	Indian Harbor Y. C.	Geo. Townsend
G-9	Nuisance	Columbia Yacht Club	Mrs. Delphine Dodge
			Cromwell
G-10	Miss Tampa	Davis Islands Y. C.	D. P. Davis
G-32	Baby America II	Detroit Yacht Club	Gar. Wood
G-33	Impshi	Dodge Dealers' Assoc.	Dodge Dealers' A'n.
G-57	Curtiss-Wilgold II	Buffalo Launch Club	R. V. Williams
D-1	Miss Syndicate	Dodge Dealers' Assoc.	Dodge Dealers' A'n.

Prizes for Gold Cup Regatta

EVENT NO. 1—PHILADELPHIA TO MANHASSET BAY CLASS A

1ST PRIZES: Possession of James Craig Trophy for one year
24-inch mahogany steering wheel
1925 Championship Pennant

2ND PRIZE: Search light

CLASS B

1ST PRIZE: Trophy

2ND PRIZE: Search light

COMPLETION PRIZES: Classes A & B.

Charms, suitably engraved, will be presented to each captain and every member of the crew, on all boats finishing the race

EVENT NO. 1 A—CRUISERS, PHILADELPHIA TO COLUMBIA YACHT CLUB (N. Y. C.)

1ST PRIZES: Trophy. 1925 Championship Pennant

2ND PRIZE: Trophy

3rd PRIZE: Trophy

All boats not winning one of these prizes will receive a prize for finishing and all boats starting but not finishing will receive a consolation prize.

EVENT NO. 1 B—EXPRESS CRUISERS, PHILADELPHIA TO COLUMBIA YACHT CLUB (N. Y. C.)

1ST PRIZE: Trophy

2ND PRIZE: Trophy

3rd PRIZE: Trophy

All boats not winning one of these prizes will receive a prize for finishing and all boats starting but not finishing will receive a consolation prize.

Combined First Prize for Events No. 1 A and No. 1 B: \$1,000 Cash.

EVENT NO. 2—EXPRESS CRUISER CHAMPIONSHIP OF AMERICA

1ST PRIZES: Possession of Express Cruiser Championship Trophy for one year.

Compass and Binnacle

1925 Championship Pennant

2ND PRIZE: Compass and Binnacle

3rd PRIZE: Compass and Binnacle

EVENT NO. 2 A—HANDICAP EXPRESS CRUISER CHAMPIONSHIP OF LONG ISLAND SOUND

1ST PRIZE: Trophy

2ND PRIZE: Trophy

EVENT NO. 2 B—FREE-FOR-ALL CHAMPIONSHIP OF LONG ISLAND SOUND

1ST PRIZE: Trophy

2ND PRIZE: Trophy

EVENT NO. 3—HANDICAP CRUISER CHAMPIONSHIP OF AMERICA

1ST PRIZES: Possession of Cruiser Championship Trophy for one year.

Prize to be selected by winner

1925 Championship Pennant

2ND PRIZE: To be selected by winner

3rd PRIZE: To be selected by winner

4TH PRIZE: To be selected by winner

EVENT NO. 3 A—HANDICAP CRUISER CHAMPIONSHIP OF GREATER NEW YORK

1ST PRIZES: 55-piece dinner set with Owner's and Club Flags.
1925 Championship Pennant.

2ND PRIZE: Trophy

3rd PRIZE: Trophy

EVENT NO. 4 A—ONE MILE CHAMPIONSHIP OF AMERICA

1ST PRIZES: Possession of One Mile Championship Trophy until Speed Record is Broken

1925 Championship Pennant

EVENTS NOS. 4, 6, 20, 22—MIAMI BEACH ONE-DESIGN BOATS

1ST PRIZES: Trophy

1925 Championship Pennant

2ND PRIZE: Trophy

3rd PRIZE: Trophy

EVENTS NOS. 5, 7, 9—GOLD CUP RACE FOR A. P. B. A. CHAMPIONSHIP OF AMERICA

1ST PRIZES: Possession of Gold Cup for One Year

Sterling Silver Cup

1925 Championship Pennant

2ND PRIZE: Stormoguide

3RD PRIZE: Photograph

WINNER OF FIRST HEAT: Sterling Luncheon Platter

WINNER OF SECOND HEAT: Sterling Flower Basket

WINNER OF THIRD HEAT: Sterling Center Piece

EVENT NO. 8—BABY GAR INVITATION RACE

1ST PRIZES: Sterling Fruit Bowl

1925 Championship Pennant

2ND PRIZE: Sterling Silver Server

EVENT NO. 10—FREE-FOR-ALL DISPLACEMENT RUNABOUTS

1ST PRIZES: Cocktail Shaker, 8 Glasses and Mahogany Tray

1925 Championship Pennant

2ND PRIZE: Marine Clock

3rd PRIZE: Travelling Clock

EVENT NO. 11—OUTBOARD CHAMPIONSHIPS

CLASS A

1ST PRIZE: Sterling Trophy

CLASS B

1ST PRIZE: Sterling Trophy

CLASS C

1ST PRIZE: Sterling Trophy

EVENT NO. 12—AQUAPLANE RACE

1ST PRIZE: Sterling Trophy

EVENT NO. 13—TRUTH RACE

1ST PRIZE: To be selected by Winner

2ND PRIZE: To be selected by Winner

3rd PRIZE: To be selected by Winner

4TH PRIZE: To be selected by Winner

5TH PRIZE: To be selected by Winner

EVENTS NOS. 14, 15, 17, 19—GRAND NATIONAL INTERCLASS CHAMPIONSHIP

1ST PRIZES: Possession of Dodge Trophy until Next Race

Enclosed Tantler Set

1925 Championship Pennant

2ND PRIZE: Ship's Clock

3rd PRIZE: Silver Demi-Tasse Service.

EVENTS NOS. 16, 18—151 CUBIC INCH HYDROPLANES

1ST PRIZE: \$185 Cash

2ND PRIZE: \$95 Cash

3rd PRIZE: \$45 Cash

EVENT NO. 21—FREE-FOR-ALL

1ST PRIZES: Possession of International Trophy for One Year

Sterling Trophy

1925 Championship Pennant

2ND PRIZE: Sterling Trophy

3rd PRIZE: Sterling Trophy

4TH PRIZE: Sterling Trophy

EVENT NO. 23—MANUFACTURERS' (SPEEDSTER) OUTBOARD RACE

1ST PRIZE: Sterling Trophy

EVENT NO. 24—OUTBOARD MOTOR TENDER RACE

1ST PRIZE: Nine-foot Tender

LIST OF DONORS OF TROPHIES

Ovington's, W. & J. Tiebout, Topping Bros., E. J. Willis Co., New York Athletic Club, Columbia Yacht Club, Middletown Yacht Club, Sachems Head Yacht Club, Tri-State Yacht Club, Delaware River Yachtman's League, Morris Rosenfeld, A. Haus-tetter, New York Gold Cup Committee, National Association of Boat & Engine Manufacturers, Walter P. Chrysler, Truly Warner, S. Appel & Co., B. F. Wood, Inc., B. Schellenberg and Son, A. W. Ferguson, Frank R. Campbell, MoToR Boating, C. M. Parker, F. C. Edson, Jardine Co.

Yard and Shop

(Continued from page 94)

Henry J. Gielow, Inc., Carries On

The announcement is made that Winthrop Merton Rice, who has been associated with the firm of Henry J. Gielow, Inc., as Chief Assistant Designer, for a period of thirteen years, has been placed in charge of the Designs Department as Chief Engineer. The staff of engineers built up during the life-time of Mr. Gielow, is well equipped to carry on the work mapped out by the late President. The Brokerage Department will still continue to be operated as in the past, there being no changes made in this end of the business and the corporation will continue to function, carrying out the same broad policies on which the business was built some 35 years ago.



J. W. Shillan's Silvel II won a two-mile race on the Thames River, England, with an Elto powered boat

Combining Boats and Real Estate

Clement Amory for many years associated with the Consolidated Shipbuilding Corporation has changed his base of operations to Miami Beach, and engaged in real estate there. His liking for boats and water, however, have impelled him to keep in touch with boating, to such an extent that he is arranging his office to handle the sales of boats of whatever kind, from small skiffs to large yachts. His experience is of such a practical and technical nature, that he is in a position to recommend the purchasers, the most suitable type of boats for their particular needs. Boat builders throughout the country are co-operating with Mr. Amory, and yachtsmen will find his advice impartial, and perfectly fair to all builders.

Champion Billiardist Proves Himself Fisherman

A Clipping from a recent issue of the Minneapolis Journal says:

Johnny Layton, ex-champion billiardist, of St. Louis, Mo., who is sojourning at Grand View Lodge on Gull Lake, has everything coming his way. Johnny's good luck started one day last winter when he met Ole Evinrude in Chicago, when he dropped the remark that he intended going up into Minnesota on a fishing trip during the coming summer. Mr. Evinrude became so interested that he forthwith presented Johnny with a fine fishing outfit consisting of a special outboard air-chambered Elto motor boat and a Light Twin Elto Motor and told Johnny to go and get 'em. Johnny did. He hid himself to the lake where he thought they were the biggest and thickest. Arriving at Grand View Lodge he started in fishing and had reasonably good luck from the start using various kinds of popular plug baits, spoons, etc. The climax came, however, when one day he happened to tie on his line a precarious looking plug that he had picked up in an army store for 15 cents. He tossed out. It seemed that every fish in the lake either took a terrible hatred or fell violently in love with it, Johnny does not know which. Anyway, bass, pickerel and pike and Great Northern pike alike fought to sink their teeth into Johnny's new-found Aladdin.

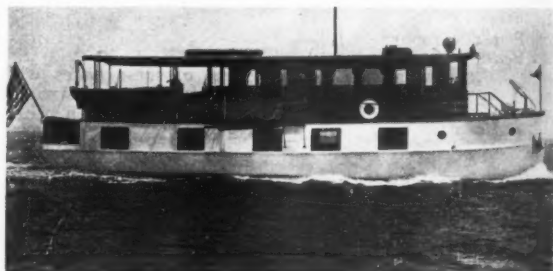
The best part of it is that Johnny still retains his antiquated, battle-scarred plug and is taking it back home to show to the boys.

Johnson Motors in Arctic Circle

The Johnson Outboard Motors that accompanied the MacMillan polar expedition have been subjected to unusual conditions and performed in a most satisfactory manner, according to a radiogram received August 8, by the Johnson Motor Company from E. F. McDonald, Jr., Commander of the S. S. Peary, MacMillan Arctic Expedition. The radiogram is dated August 6 and reads:

"This message is sent from Etah, Greenland, less than twelve degrees from the North Pole. Temperature of water, twenty-eight degrees. It freezes at twenty-seven. Our little Johnson's have performed almost miracles. They have been the only means of towing our heavy raft, often loaded to twelve tons, moving our gasoline, oil, and supplies to shore, towing our planes with the rafts ashore to have wings mounted, moving planes from shore to moorings, etc. Today I gave them a clean test when I towed two walrus I had shot and harpooned to harbor at one time. The bull walrus weighed twenty-five hundred pounds and the cow walrus, fourteen hundred pounds. True, we did not make much speed but with this enormous dead load that could not be helped. Thanks to Eskimo lines we landed our bags with our Johnsons. Though I knew Johnson Motors when I used them for my yacht Zenith I appreciate them more in this fairyland of ice in the Arctic."

The MacMillan expedition took six Johnson's with it when it left Wiscasset, Me., June 20. Johnson's were selected because of their light weight and ability to withstand extraordinary service conditions. As the radiogram indicates they are subject to severe tests. That these motors are meeting the conditions in such a satisfactory manner excites no surprise from the officials of the Johnson Company, although the extent of Johnson performance has never been so completely shown.



The 57-foot houseboat Rascal, built for S. E. Etherington, and powered with a 50-60 h.p. Standard gasoline engine

New Records Established by Outboards

Speeding over a one mile straight-away course at the rate of 16.68 miles per hour the new Johnson Five h.p. outboard motor established a new world's record in its class. This record is considered a phenomenal performance in the outboard motor field as it is the first time in history that an outboard motor has successfully propelled a hydro-plane. The record was officially timed and recorded by the Mississippi Valley Power Boat Association during the progress of their Regatta held at White Lake, Michigan, July 3, 4 and 5. J. L. Helton piloted the craft, which was a fourteen foot hydroplane type, to the new record. This speed has never before been approached as the Gold Cup races last year were won at a speed of under twelve miles per hour, which was considered very fast at that time.

The new motor is of 22 cubic inch piston displacement and develops full five horsepower. This motor will be announced for sale in the near future and will prove a boon to the speed enthusiast and commercial man.

A Johnson outboard motor of the standard 2½ horsepower type won the Class A race for motors having less than 12 cubic inch piston displacement. The two and one-half-mile course was covered in the fast time of 13 minutes 12 seconds. Second and third places were also won by Johnson motor propelled boats, they being piloted by L. F. Helton and A. R. Knauer.

A Lockwood-Ash motor won the two and one-half-mile race on July 4 for motors having from 12 to 17 cubic inch piston displacement. A. L. Lockwood drove his three horsepower motor over the winning line in 11 minutes 58 seconds. J. L. Helton captured second place with a 2½ horsepower Johnson motor.

(Continued on page 134)

ERICO Electric Searchlights

Equipped with

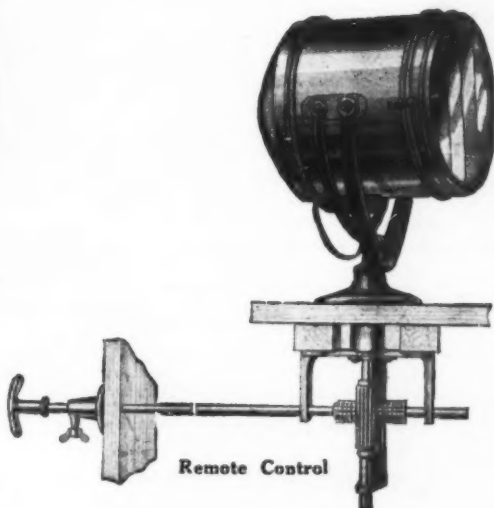
Special Bausch and Lomb Parabolic Glass Reflectors and Nitrogen Incandescent Lamps produce the most powerful, brilliant, white, shaft of light.



Cabin Control



Deck Control



Remote Control

THESE ERICO searchlights are of the new improved type and are readily adjusted for narrow or wide beam. The construction is of the most substantial and durable character. The barrels are heavy 18 gauge brass, reinforced with heavy beads at each end. All other parts except body are heavy cast bronze. Made in three types, cabin control, deck control and remote control, in two sizes each to operate on 6, 12, 24, 32 and 110 volts, as specified.

ERICO Universal Shaft Log



THE ERICO Universal Shaft Log is widely used on racing boats and craft of all types and is recommended by experienced boat racers as well as by naval architects and boat builders.

The ball joint working in sliding plates, permits not only the change of angle of shaft bearing to fastening surface but also the movement of the

point of bearing itself in any direction, up or down, right or left. Both this radial and lateral action are securely locked by a single cap nut.

This feature not only simplifies the initial installation but makes possible the easy readjustment to perfect alignment. Made entirely of best bronze bearing metal. All sizes carried in stock.

Write for further details of these ERICO specialties and also ask for catalog describing the complete line of ERICO marine equipment.

HUBBARD HERRICKSON & CO.

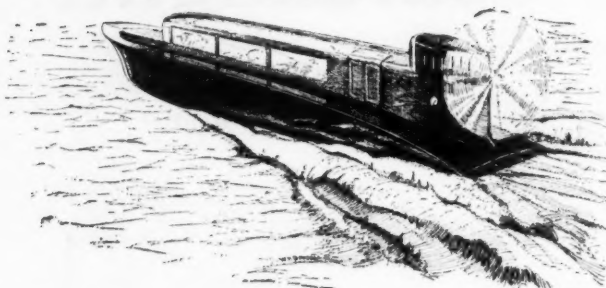


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SAFTIBOAT



Brownback Saftiboat (Patents applied for).

Comfort—Enclosed cabin—no wind or spray. Engine aft and separate, passengers in individual overstuffed chairs, heat for cool days.

Safety—Nothing extends below hull. Can run in shallow, grassy or sandy waters. Engine and gas tanks separate above hull, draining overboard. No fire hazard. Hull design many times as strong as standard keel and rib construction.

Speed—Highest possible speed for power, from new hull design. SHARK Special Airdrive Motor, developed especially for this service.

Ideal for private use or boat lines.

By:

Brownback Motor Laboratories, Inc.

Shark and Lycoming Marine Engines
42-140 H.P. 4-8 Cylinders

H. L. Brownback and Associates

17 BATTERY PLACE

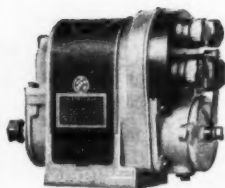
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This trade mark on a starting, lighting or ignition unit or part stamps it as a genuine Bosch Product—backed by the Bosch guarantee of dependable service.



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OUR new 64 page book of designs describes over 55 types of boats that you can easily build. Not toys, but real substantial boats—CABIN CRUISERS, V-BOTTOM RUNABOUTS, HYDROPLANES, ROW BOATS and SAIL BOATS; all of modern design. Many professional builders use Brooks Knock-Down Boat Frames. The Brooks system is the only successful and economical method for amateurs. Send 25 cents for the book of 55 designs today. See for yourself how easy it is to build your own boat and how little it costs.

BROOKS BOAT CO., INC., Dept. 33, Saginaw, Mich.
Originators of the pattern and KNOCK-DOWN system of Boat Building

To Gloucester on Blue Water

(Continued from page 34)

seven years to one sentence, I may say that I got along without the log, resigned from the N. R. F. anyway, and on July 27 found myself caught in the fog previously mentioned.

When the question of streaming the patent log came up, I remembered what my naval friend had told me and said we'd get along without it. Then I happened to recall that I was a guest on the schooner Blue Water, owned by Melville R. Smith, of Freeport, L. I., and that it wasn't for me to say whether or not we should stream the log.

Hence the log was streamed when we had Horton Point a mile or so on our starboard hand and we had just laid a starboard tack course across the Sound. The breeze at the time was fresh from the east, the visibility was limited to a matter of two hundred yards, and it was more or less important that we head about before coming to Long Sand Shoal at the mouth of the Connecticut River. We had about six miles of deep water to traverse before coming to the shoal.

With the log ticking off the miles on our taffrail, I did exactly what the naval commander said one can't help doing. I trusted it. When we had logged five miles I thought it was almost time to come about. As a matter of fact, it was past time. Minutes passed while the fisherman's staysail was being lowered to the deck, and while we were still on the starboard tack the helmsman sighted an obstruction buoy close aboard. According to the untruthful log, it should have been half a mile away.

We were then in twelve feet of water and we tacked hurriedly, standing out of danger. I said to myself, "Snappy Joe was right. Never trust a log in foggy weather. Never trust anything, including yourself."

With this comforting reflection, we stood on until Plum Island showed up over our bowsprit and we put about after I had mistaken a rock for a rowboat. Thereafter Mel Smith took the watch and we passed out of the Sound without mishap.

There were some who said that the Gloucester race would prove an awful come-down for the deep water men who navigated their yachts to Bermuda in '23 and '24. It was predicted that we would have a fair wind from beginning to end and that the twenty-five contestants would finish in the order of their known speed. Navigational difficulties would be nil.

This was the wrong dope. For hours on end the race was a knock-down and drag-out party, with Gulf Stream weather occurring in the most unexpected places. Fog in Long Island Sound caused one sloop to take the ground and withdraw with a broken rudder. A head sea in Block Island forced another to seek shelter with opened seams. Heavy weather in Nantucket Sound carried away a racing yawl's halliards and obliged her to put back for repairs. And a slight miscalculation in piloting sat Blue Water on Hedge Fence in Vineyard Sound, where she stayed three and a half hours while half a dozen competitors breezed by and outdistanced her.

Because of these vicissitudes the race was a notable one, and because of the sportsmanship and racing ability of Melville Smith and his crew I look back on it with particularly grateful memory.

Blue Water is a 55-foot Alden schooner and raced in Class D for boats of the cruising type. With a gentle southeasterly which had picked up from a flat calm during the last hour before the start, we were across the Scotch Caps line at the 4:15 gun, shaking out the balloon as we crossed. Caroline, a big Lawley schooner, which was scratch boat of our class, came over astern of us, but with her racing sails already set, and drawing up, soon overhauled us and kept the lead from then on until after nightfall.

During the daylight hours we got acquainted with the rigging and with one another, and it was not until 8 p.m. that the first entry was recorded in the deck log. At that time it was duly set down with the only pencil on board—a pencil that had the habit of losing itself anywhere from the fore peak to the after lazarette—that the owner's watch consisted of himself, his brother, Lesueur Smith, Jasper Morgan, and Robert Bartlett. In the other watch were Fred Hewlett, Lyman Brown, John K. Birch and myself.

All of these hands with the exception of Lesueur Smith and me are accomplished racing men, and had come through Larchmont Week with high honors. The skill which they have acquired with New York Thirties and other small craft was readily transferred to their handling of Blue Water, and it was a revelation to me to watch their helmsmanship and their expert trimming of sails.

Once when I was on watch I wandered forward on some such important errand as begging an orange from the cook, and while I was at the galley hatch I received a hail from the helmsman: "Oh, Al, just take a look at the headsails and see if they're drawing all right."

(Continued on page 132)

Miller-Wood Marine Engines

Model MW-215

8-Cylinder-in-line.

215 cu. in. piston displacement.

Price: \$6000 f.o.b. factory.

Model MW-91

8-Cylinder-in-line.

91 cu. in. piston displacement.

Price: \$5000 f.o.b. factory.

Model MW-0

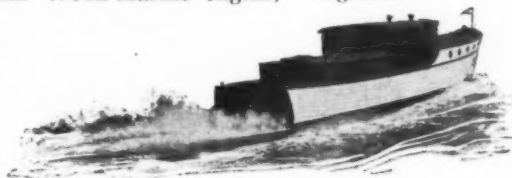
4-Cylinder Outboard.

Price and details to be announced later.

GAR WOOD is acknowledged the world's leading manufacturer of the highest grade and fastest turning marine engines. The Gar Wood-Marine engines, 400 H.P. and 500 H. P., have long since demonstrated their superior qualities in lightness and speed. One horsepower for every 3½ pounds, together with their great endurance and reliability, has made possible the many high speed records established by boats powered with the Gar Wood-Marine engine, such as the "Cigarette," owned by L. Gordon Hamersley; Harris Hammond's "Venture," S. E. Hutchinson's "Cintra" and the famous Baby Gars and Gar Wood Flyers.

In addition to the famous Gar Wood-Marine engine, Gar Wood has developed in partnership with Mr. Harry Miller, of Los Angeles, designer of automobile racing engines, three new models to be known as the Miller-Wood. These engines, while conforming in general to the Miller high speed, light weight automobile type, are built especially for marine service and embody every feature typical of marine engines.

If you want maximum speed with reliability in any run-about or cruiser, from 30 ft. up, you should investigate the Gar Wood - Marine and the Miller-Wood marine engines.



At Palm Beach, on February 22nd, the Ocean Race was won by "Gar Jr. II," on the right; with "W. J. Conner's III" second, on the left, "Venture" third, above; and "Fifi" fourth. Thirty-five miles through open seas at better than 40 miles per hour was the record of these boats. Only 62 seconds between the first and finish. All equipped with Gar Wood Marine Engines.

Gar Wood-Marine Model T-25

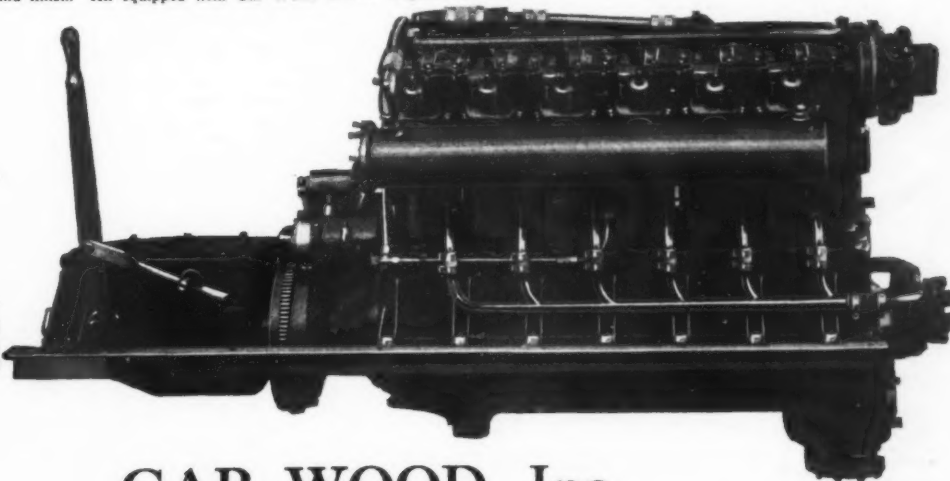
400 H.P. at 1700 R.P.M.

Price \$4,500.00

F. O. B. Factory

SPECIFICATIONS:

12-cylinder, V-Type, 5" bore, 7" stroke. Overall length 83½"; width 36"; height 43½". Weight 1350 lbs.



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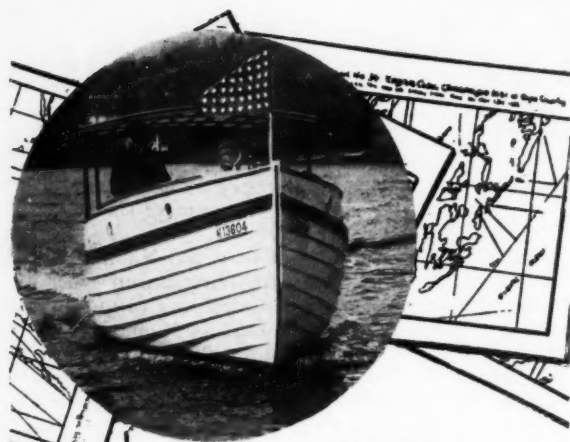
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To Gloucester on Blue Water

(Continued from page 130)

So I stepped forward of the foremast and cast a professional eye aloft. So far as I could see, everything was perfect—forestaysail, jib, and jib topsail all belying out and working like draft horses. Basing my opinion on the fact that neither luff nor leach of any sail was fluttering, I called back, "Everything fine. Are you on the course?"

The question about the course was thrown in for effect. It gives the atmosphere that goes with sure knowledge of the racing art. My opinion was no sooner given than Jasper Morgan and Lyman Brown stepped forward and also cast a couple of professional eyes aloft. Then one of them—they are younger than I am and have a proper respect for age—said:

"Mr. Loomis, don't you think the jib topsail is a little flat?"

"Well, yes," I replied. "Now that you mention it, it may be a trifle, well, a trifle flat."

"Shall we ease the sheet a little?"

"By all means, ease the sheet."

Then the other one said: "And Mr. Loomis, don't you think the jib would stand a little easing? It doesn't seem to be drawing quite as well as it might."

"To be sure," I returned, giving the jib a critical glance. "One could easily say that the jib isn't drawing as well as it might."

So somebody aft received an order to ease the jib sheet and Morgan and Brown both piped up:

"And don't you think the forestaysail would stand trimming a little? Just a hair, you know?"

I sank my teeth into an unpeeled orange and a moment later replied: "I think you're quite right about the forestaysail. And I might add that the foresail and the main don't seem to be doing their work. What do you think?"

"Oh, they're absolutely perfect as they are. Don't you agree, Mr. Loomis?"

"Certainly. I don't see how they could be improved. I wish I had a drink of something."

After two or three conversations like this I kept myself well aft and stood ready at all times to look for the log book when the subject of trimming sail was introduced.

By 8 p.m. of July 26 the racing fleet was well spread out along the Sound, and Blue Water was abreast of Crane Neck Point, with several boats grouped near us. Caroline was still ahead, somewhat on our port bow, resisting all our efforts to overhaul her. We were flying at that time all ordinary sail and the main topsail, fisherman's staysail, and jib topsail. A half hour later Stratford Shoal Light was abeam and we were making 7 knots with the wind slowly freshening. At 10:30 the boat on our port bow which in the darkness we took to be Caroline struck a soft spot and we overtook and passed her rapidly. From then on until midnight the wind eased and during the middle watch little if anything happened.

But at daybreak when the sloop Bonita, skimming like a ghost over the flat, almost airless Sound, crept through our lee, fog settled, and we tuned our ears for reed horns and sirens. At 6:30 the wind came out of the east and we streamed the log as previously noted, and stood over on the starboard tack for the Connecticut shore. Except for the head wind, conditions were now ideal for racing. The fog brought in the element of skill in navigation, and we were due to carry a fair tide through the race. Let the devil take the careless, said I, when nobody was listening, and may the best boats go aground.

After picking up Bartlett Reef Lightvessel in two hitches, we eased the sheets on the port tack and stood away for Race Rock, whose ghastly group siren was shattering the fog to southeastward. Twenty minutes later with a widening horizon we had the Rock abeam on our port hand and saw half a dozen of our competitors ahead or astern of us. Caroline was to weather, shooting through the race like a meteor. Malabar V had passed through and was beating toward Fishers Island.

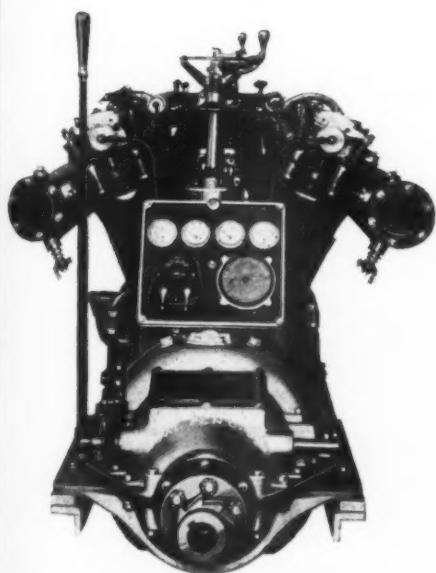
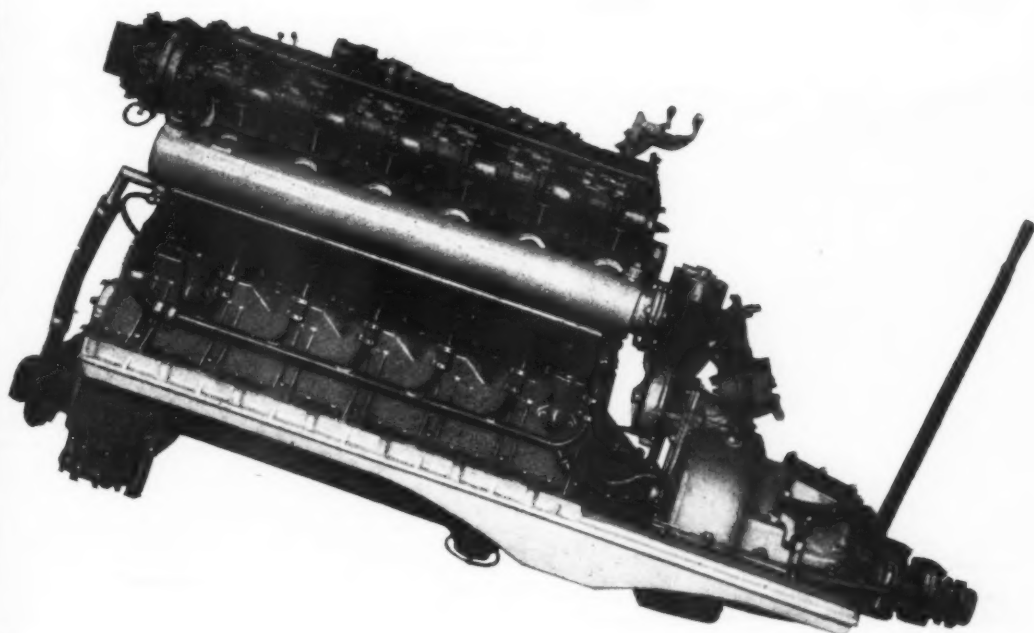
This glimpse of our rivals prompted Lyman Brown to call for a little racing technique, and while we were still carrying the strength of the current we came about on the starboard tack and lee-bowed the tide across Caroline's bow. This maneuver caused her to bear away astern of us, and to a large extent determined our whole day's racing program. When well in shore we tacked again, worked out to the center of the strongest current, lee-bowed it once more, and then searched the Fishers Island shore for wind. Meanwhile, Caroline and many of the other craft worked out into Block Island Sound, looking for a southerly slant.

During the afternoon while we were hugging the mainland the wind freshened from northward and we found ourselves able to lay a course with sheets started for Vineyard Sound Lightvessel. Thus Mel Smith's racing strategy played hand in hand with luck. Within range of our vision only one other boat had the weather gauge of the entrance to Vineyard Sound, while all those which had gone wind-hunting near Block Island found themselves to leeward of their goal.

(Continued on page 136)

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(Continued from page 128h)

Freeman Boats Ohio River in Record Time

While lecturing on his Canadian Rockies Expedition in New York and Washington last April, Lewis Freeman was asked by the National Geographic Society to boat the Ohio River in order to supply them with an illustrated article on Rivers



Lewis R. Freeman with his Elto powered rowboat and radio equipment used on the thousand-mile trip down the Ohio River

of the Mississippi Basin, for early publication in the National Geographic Magazine.

As Mr. Freeman was due to sail with the United States Fleet in the capacity of correspondent on their Australian cruise, leaving Honolulu early in June, time was a great factor in the undertaking. If he was to join the fleet at the appointed time, Mr. Freeman knew that he would have to do the Ohio in ten days' time at the most.

Freeman's many friends, as well as friends of the Elto, will be glad to learn that he was most successful in his undertaking; for the entire trip, a distance of 967 miles, according to Government measurement, was covered in exactly 88 hours running time from the start at Pittsburgh, Pa., to the finish, at Cairo, Ill. This is without doubt a record run as far as outboard motors are concerned.

Mr. Freeman's outfit weighed practically 2,000 pounds and included an 18-foot Rhinelander rowboat, standard Elto motor, complete camping equipment and a portable Superheterodyne Radiola. The radio equipment was used for the purpose of securing weather forecasts to enable him to work out his schedules in advance. This is probably the first time that any radio has ever been used as an accessory or aid to river navigation.

Severe rains were encountered on practically the entire trip, greatly hindering progress at times, but floods and high water made it possible to run over all of the forty to fifty dams on the Ohio and also to run the Falls at Louisville, which have a drop of 21 feet in two miles.

On every day a full distance run was made of at least 100 miles, and on two days runs of 120 to 130 miles were made. The average current was not more than three miles an hour at any time. The consumption of gas for the entire trip totaled 37 gallons.

A Stunt Journey

A novel advertising venture was successfully undertaken not long ago by the representative of a western mattress manufacturer, who made a journey from Keokuk, Iowa, to St. Louis, Mo., a distance of 202 miles, while seated on a Kapoc mattress, to which had been attached a standard Caille Liberty Twin-drive engine. The mattress was fitted with a light twin frame around the edges to act as a stretcher and to prevent it from doubling up. Several other similar floats were arranged and served to carry bathing girls and other equipment. The stunt had been extensively advertised in the local newspapers and attracted tremendous attention throughout the journey. A motor boat accompanied the mattress, but was often miles away. Sidney Helms, the intrepid salesman who made this journey, rode the motor mattress throughout the trip, and as a rule followed the center of the river. At times the water was quite rough, and he was tossed up and down by the waves. It was an exceptional demonstration of the ability of the Kapoc material to remain afloat and sustain a substantial load. The mattresses were cut open at the end of the trip for inspection, and it was found that the water had penetrated to a depth of from $\frac{1}{2}$ to 1 inch. Eighty-five per cent of the Kapoc was entirely dry, at the end of four solid days of immersion. While the use of mattresses as a means of transportation is not recommended, the spectacular nature of the stunt attracted much attention and publicity.

Brooks Knock-Down Frames Are Popular

The knock-down method of boat building has struck the popular fancy of amateur boat builders throughout the country. The Brooks Boat Company of Saginaw, who are specialists in the preparation of knock-down boat material, are arranging to supply at least seven small hydroplanes for a southern yacht club, which are to be patterned after the design of the famous western hydroplane, Margaret III. Another job will be a 24-foot V-bottom sport runabout, being fitted with a powerful Hall-Scott engine. The little hydroplane design mentioned seems to be popular throughout the world, as knock-down boats have been shipped to builders in British East Africa, Tasmania, Canada, and other distant parts.

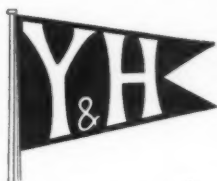
(Continued on page 142)



Sidney Helms, who made an unusual voyage of 200 miles on a Kapoc mattress, driven by a Caille lightweight twin engine

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Bridge deck, V bottom, standardized with single or double cabins and deck house.

40 ft.—45 ft.—52 ft.
Speeds of from 12 to 30 miles per hour.

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Single or double cabin.
4 cyl. Kermath, speed 12 miles per hour.
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8 cylinder, 4" x 5"; 220 horsepower at 2,000 R.P.M. Weight, 840 lbs. \$2,000.
Salt water equipped.

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V BOTTOM RUNABOUTS WITH LYCOMING ENGINES

4 cylinder, 23 to 25 miles per hour.
\$1800.

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Equipped complete with self starters.

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Medium Duty. 28-46 horsepower.
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THE DAYTON “cub” will give you the kind of running water system you have hoped for—uniform pressure to all parts of the boat—carefree service and absolute dependability—quiet operation—negligible expense—all in a minimum of space.

Made in various sizes and pumping capacities, there is a DAYTON Water System to suit every need. Before you install a water system on your boat or in your country home, see the “DAYTON” first. It will save you both time and money.

With running water under pressure, standard plumbing fixtures, lavatories, sinks, showers, closets, etc., can be used instead of expensive, special marine fixtures.

NAVAL ARCHITECTS AND BUILDERS are invited to use our free service in selecting the proper equipment for the requirements.

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For the average boat DAYTON “Cub” is ideal. Small and compact (10" x 26" x 22" high), it may be quickly installed anywhere. Largest capacity of any pump for the price. Inexpensive to operate—practically no maintenance cost. Supplies water under pressure to all parts of boat. The best small pump ever built—yet it costs only \$85.00.

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Make the water do the running

To Gloucester on Blue Water

(Continued from page 132)

A long ground swell rolled in from the open ocean and with the chop kicked up by the freshening norther we had our first taste of cruising weather. Blue Water took it beautifully and beneath a squally, overcast sky logged nine knots under four lowers. Before dark we sighted and overhauled a five-masted schooner close-hauled on the port tack, and at 9 p.m. when darkness had closed in we passed the lightship close aboard and continued our easterly course up the Sound. At this moment we felt that our chances of winning the race to Gloucester were never better and that we had secured a lead of several hours over most of our competitors.

And after that, grief. At 12:15 the watch below was called, and as I got into my clothes and rummaged around for a mackinaw I heard Mel Smith say to the helmsman: “We’re looking for Hedge Fence Lightvessel. The chart is old and the characteristic of the light seems to have been changed. So keep just on the edge of that red sector until we make sure.”

Red sector! I jumped to the chart which was spread out on the port bunk of the after cabin, and hunted for the red sector. There it was. A danger signal beaming out from the lighthouse on Nobska Point to warn mariners away from Hedge Fence Shoal. As I looked, Blue Water lifted to troubled water, and her keel touched the sand. The tide, flooding madly to the southeastward, sucked her farther on and in an instant we were hard aground.

The call came for all hands on deck, and we tumbled out. Down came the mainsail and the fore, both pressed by the quartering wind against the shrouds and lazyjacks and stubbornly resisting the strength of the entire crew. The dinghy went over-side and two men jumped in to sound for deep water. As the oarsman pulled away from the ship’s side the current swept him ahead, and only a line made fast to the dinghy’s stern prevented the boat’s crew from being carried out to sea. In the dark the swift greed of the rushing tide was awe-inspiring. Again the oarsman rowed away, and this time although he was able to clear Blue Water’s side a matter of twenty feet the flood soon carried him to the end of the tether. Under these conditions it was folly even to think of running out a kedge.

All hands sweated at the spinnaker pole, placing one end on bottom and hauling down on a tackle made fast to Blue Water’s gunwale. By inches the bow swung to leeward, and in time the foreboom was buoyed to the weather rigging and the sail hoisted on the starboard tack. But still the heavy schooner kept the ground.

When every recourse had failed save that of breaking the motor’s seal and working off with power, we sat down and watched our competitors stream by, ghost-like, between us and the lights of Edgartown. This one eclipsed East Chop for a single instant—a sloop. The next eclipsed it twice—a schooner. Then another sloop, and then a yawl, identified by a spotlight momentarily flashed on her mizzen.

It was agonizing, sickening. As the tide rose and slapped against our counter, we bumped still farther on and I for one saw visions of a tug coming out in the morning to tow us ignominiously off. Soon all hands but Brown and I went below for a snack and we two lay on the cabin housing, speculating on where a man would fetch up if he fell overboard in that tide rip. Suddenly we noted that the periodic bumping of the keel had ceased. The lights of Edgartown changed their bearing.

“We’re off!” cried Brown, and ran to the helm with a call for all hands.

Off we were, swinging to the south and heading for deep water. A few seconds later a spotlight flashed astern of us and a yawl crept by, perilously close to the shoal that we had just quitted.

“What schooner is that?”

“Blue Water.”

“Has Al Loomis fallen overboard? Haw! Haw! Haw!”

“No, doggone you, Linton Rigg, I’m here.”

Rigg and I were watchmates once and I recognized his sten-torian voice.

The mainsail went up and we straightened on our course for Hedge Fence Lightvessel. At 3:50 we had floated off at the top of the tide. At 4:15 we left the lightship close aboard to port and changed course for Cross Rip. At 5:21 we left Cross Rip astern. In the gathering day we overhauled Nahma, the yawl that had spoken us from the darkness, and at 6:40 we altered course at Handkerchief Shoal Lightvessel for Pollock Rip Shoal.

This was racing weather, with ten miles knocked down in eighty minutes against the now contrary tide. The spanking wind from the north bore against our canvas and forced the lee rail under, brushing away the sting of our grounding. A disabled yawl, the Aquanno, sailing under jib and jigger, passed us westward bound, and her helmsman, the only man on deck, waved us a nonchalant farewell.

(Continued on page 138)

Gold Cup Contenders Choose Packard Engines

PACKARD'S dominance in engine building is again shown by the fact that the majority—practically three out of four—of the contestants for the Gold Cup, have equipped their boats with the Packard Gold Cup Engine.

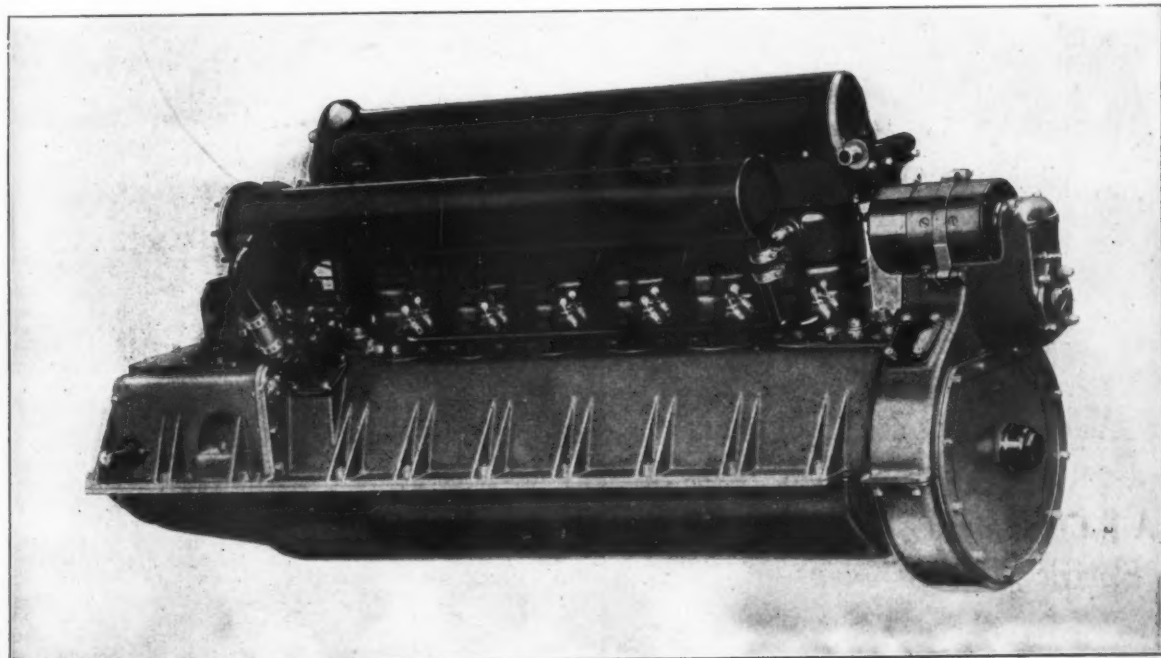
These experienced owners know that a reserve of speed and power never before possible is assured them by the new and improved type of cylinder and valve construction.

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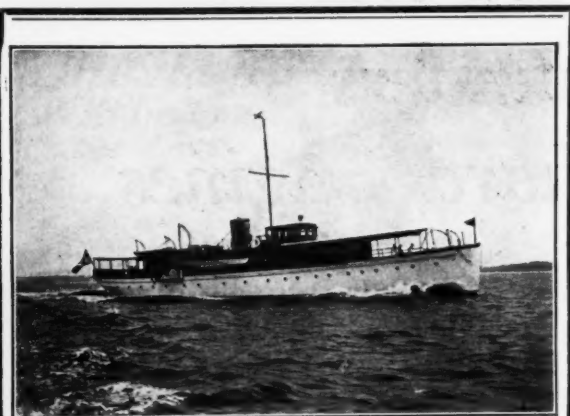
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Gypsy type for rope or cable—can be furnished with two heads or with all parts above deck. We also make a wildcat type for rope, cable or chain.

To Gloucester on Blue Water

(Continued from page 136)

Now we picked up our buoys at the Slue and romped through, at 7:50 rounding Bell 2 and hauling close on the port tack to northward. Soon the day faded and the wind died, and I went below for forty winks. The winks extended to 3 p.m., and when I came on deck at that hour I found a sunlit sea, a southerly zephyr about one degree removed from a flat calm, and half the fleet of racing yachts spread out before us.

With mainsail and balloon jib to port and spinnaker to starboard spilling into the balloon, we ghosted along Cape Cod. This was the terrible cape seen under the most auspicious circumstances, but under conditions that were not particularly favorable for yacht racing. In fifty miles of beating and running our patent log registered eighteen miles of gain. Even when allowance is made for the natural cussedness of taffrail logs, this indicates that we were not setting the sea afire with our speed.

At 6:30 p.m. the wind hauled more to westward and we went on the other tack, taking in the spinnaker. At 6:41 Cape Cod light was abeam, bearing WSW, and distant a mile and a half; and an hour later we took our departure for Gloucester from Cape Cod lighted whistler. Two hours more and we were blessed by a strengthening wind on the port quarter which bowled us along under a starlit sky at better than eight knots.

And this run across Massachusetts Bay, the finishing leg of the 256-mile race, was the best that we or our competitors experienced. I roughly estimated when I turned in at 10:00 that we should enter Gloucester Harbor at 4 a.m. But at 1:10 Blue Waters owner called down the hatch that Eastern Breakwater Light bore dead ahead and that anybody who wanted to see the finish had better step lively.

Then the wind eased, and the schooner Countess, sailing full and by, appeared out of the dark to leeward of us. She breezed by and at 2:10 we crossed the finish line astern of her, the eleventh boat to finish.

So flat did the night become from this instant that it was another ninety minutes before we had whispered into the inner harbor and let go anchor. John Birch, rolling over in his sleep as the rest of us turned in, declared distinctly: "Two hundred and fifty-six miles in fifty-eight hours and fifty minutes. Not bad, especially when you're on your vacation."

And that's the truth. It was a good race. We might have won if we had stayed afloat. But Melville Smith is a true sportsman and he reminded me that if we hadn't gone aground I wouldn't have had as much to write about. Another time, says Smith, he'll avoid even the edges of red sectors as he avoids pestilence, and another time, if he asks me, I'll sail with him and watch him win. And I'll write my story on a telegraph blank, as follows: "Blue Water first across at the start, first to finish. Three cheers for Blue Water."

A Record That Stands

Throughout the history of motor boat development the greatest factor perhaps in its ultimate perfection has been the marked influence speed-boat racing has had on stock hull design and superior mechanical performance. This in no wise differs from the rapid development of the automobile in which the brick oval at Indianapolis and the lesser important arenas of death defying speed have played a major role.

Ever since men have built boats to outdistance other men who have built other boats to attain greater speed, so the spirit of keen rivalry that has ensued has bent the will and initiative of men to subserve the gods of speed. Ever since fast motor boat racing first attracted the public attention and occupied a place of importance in the realm of speed classics Chris Smith of Algonac, Michigan, has been a factor to be reckoned with.

His part for two decades past has been one of experimentation and hope, ultimately crowned with deserving success. A success that so far has withstood the onslaught of challengers from all parts of this country and Europe. Today Smith's boats are still supreme. Tomorrow may find the laurels wrested from the world's fastest boat Miss America II, which performed the miraculous feat of 80.567 miles per hour under the guidance of Gar Wood who had Chris Smith design this wonder boat and build it for him.

This boat, Miss America II., entered in the Harmsworth Regatta to defend the British International Trophy, is apparently still good enough for Gar for it remains an entry from 1921.

Until Chris Smith and his sons divorced themselves from building speed boats purely, and bent their energies to produce the standardized Chris-Craft, a 26-foot all mahogany runabout on a production basis they had the enviable record of producing consistent Gold Cup winners. A fact which remains unequalled in the annals of motor boat building.

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1964

1965

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